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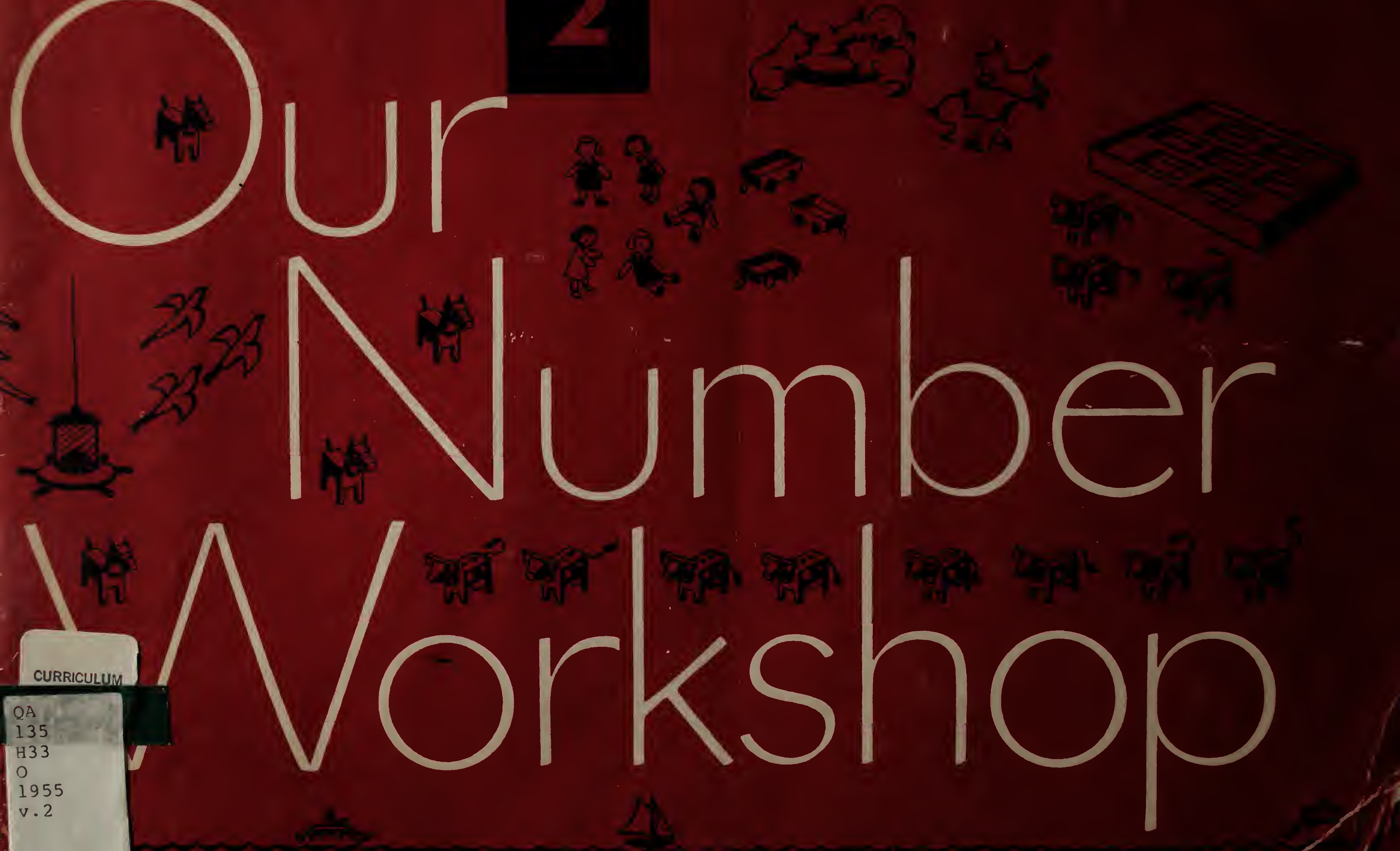
Our Number Workshop



Our Number Workshop

2

THE 1955 EDITION

by **Maurice L. Hartung**
Henry Van Engen
Catharine Mahoney

Scott, Foresman
and Company

Chicago Atlanta Dallas Palo Alto Fair Lawn, N.J.

Our Number Workshop 2 is part of The Basic Mathematics Program, a unit in the Curriculum Foundation Series. It is designed for use in any second-grade arithmetic class, and is available in both pupil's and teacher's editions. The Teacher's Edition contains a Teaching Guide section that gives detailed directions for using *Our Number Workshop 2*. The Teaching Guide includes a discussion of the arithmetic skills and concepts used on each Worksheet, instructions for teaching the number ideas and skills the children must have to do the exercises in the Workshop, and detailed directions for the use of each Worksheet.

Provision is made for individual differences by suggesting ways in which the teacher can adapt the directions she gives, the length of time allowed for doing the work, and the amount of work to be done on any one page to the needs of a particular group. Very brief directions for the use of each Worksheet are included on the Worksheet. The directions on the Worksheet are a summary of the complete directions in the Teaching Guide, and are intended only as a convenient reminder for the teacher, not as a substitute for the detailed notes. For those who use *Numbers in Action*[1] a reference to the page in that book with which each Worksheet may be used is given on the Worksheet.

Five fundamental number ideas are included in *Our Number Workshop 2*: Correspondence (one-to-one, one-to-ten, two-to-three, etc.); Number Relationships (basic facts through sums and minuends of 10; preparing for the basic facts through 18 by regrouping by tens and ones; introduction of multiplication and division concepts, including the informal form of basic facts through products and dividends of 10); Number System (to 999); Measurement (the concept of a standard unit; inch, foot, quart, pint); Money (cent, nickel, dime, quarter; counting money by tens, fives, and ones to 54¢ and by tens and ones to 99¢; relationships among coins). These concepts are discussed fully in the Teacher's Edition of *Numbers in Action*.

Independent work by the child is a feature of each Worksheet. On most Worksheets the teacher will need to work through only the first exercise with the children, who then complete the work independently. Occasionally a Worksheet requires the teacher to give one set of directions and then, after the children have completed that part of the work, to give a different set of directions.

Responses to be made by the children have been kept as simple as possible. Attention is centered on number concepts, instead of on laborious responses. The result is that the child's working time on each Worksheet is largely thinking time. Drawing, coloring, and pasting, as means of response, have been eliminated, since they contribute little or nothing to the child's learning of number concepts. The response techniques used in *Our Number Workshop 1* are used again in *Our Number Workshop 2*, but they are extended to include writing of the number symbols, two signs of operation (+ and −), and the equals sign.

Color is used functionally, rather than decoratively. For example, on such pages as 11, 41, and 58, colored squares or strips indicate where the child is to write his responses. And on such pages as 10, 19, and 64, key pictures with colored backgrounds provide the setting for all the exercises on the Worksheet.

The vocabulary agrees with that of *Numbers in Action*, with two exceptions. The word *make*, which first appears on page 71, is not used in *Numbers in Action* and should be taught as a new word. The word *just* appears one page earlier than its corresponding use in *Numbers in Action*. The Workshop contains a total of 118 different words. For children who have completed the Basic Reading Series through *Our New Friends*, only 48 words will be new.

The horizontal form of the basic facts is used until near the end of the book. This form is used so that the children will read each basic fact as a sentence. This insures a more meaningful interpretation.

The size of the pictures and of the objects within the pictures was determined by the fact that it is highly desirable for the child to learn to see a group of objects with a single eye movement. This is necessary if he is to recognize groups of objects through ten without counting.

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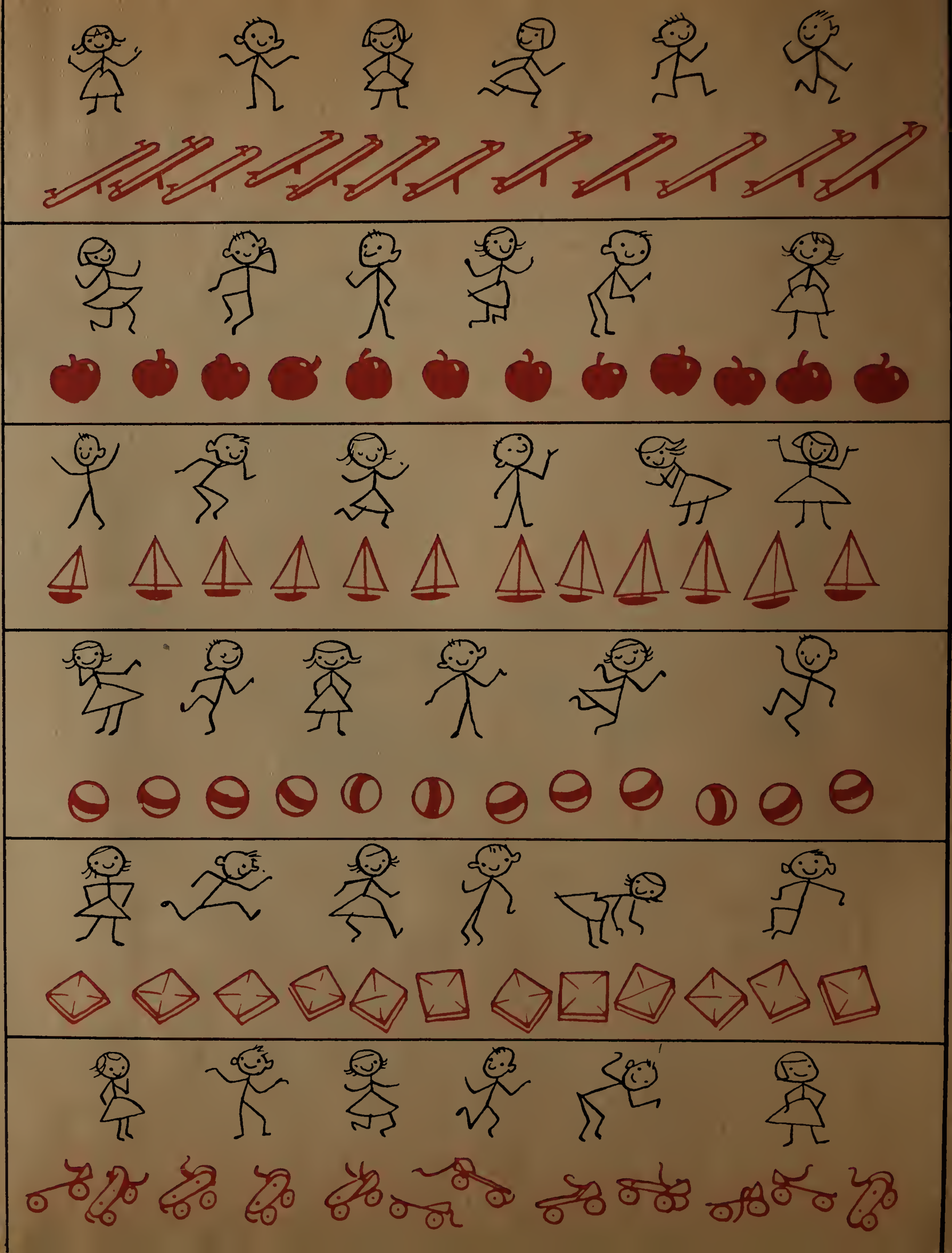
[1] **Numbers in Action, Teacher's Edition,** by Maurice L. Hartung, Henry Van Engen, and Catharine Mahoney, Scott, Foresman and Company.

Simple Pairing (Page 3 **Numbers in Action**). Let the children look at the page and discuss it for a few minutes. Try to get them to notice that there are objects in the big picture like the objects in each of the small pictures, and to discover that there are the same number of stick figures of boys and of stick figures of girls in the small pictures as there are boys and girls in the large picture. Say: Look at the first little picture. There is a stick figure of a boy for each boy in the big picture. We are going to make the little picture show the same number of swings as there are in the big picture. Find a swing in the big picture

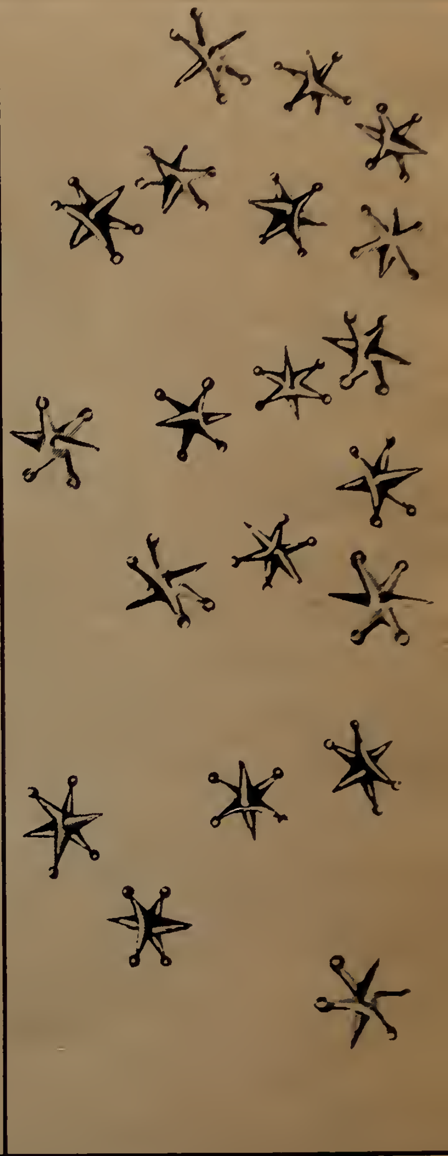
(Directions continued on page 129)

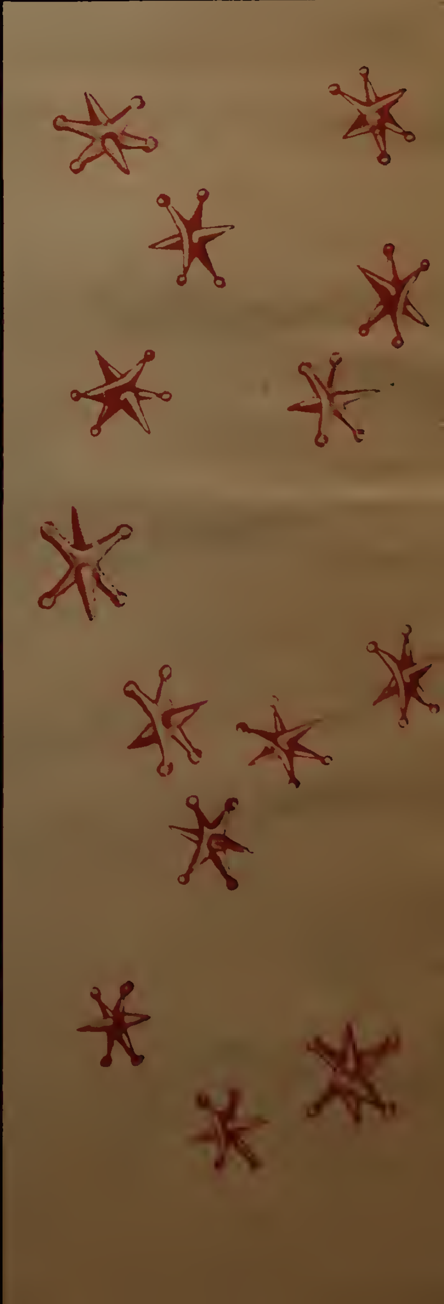


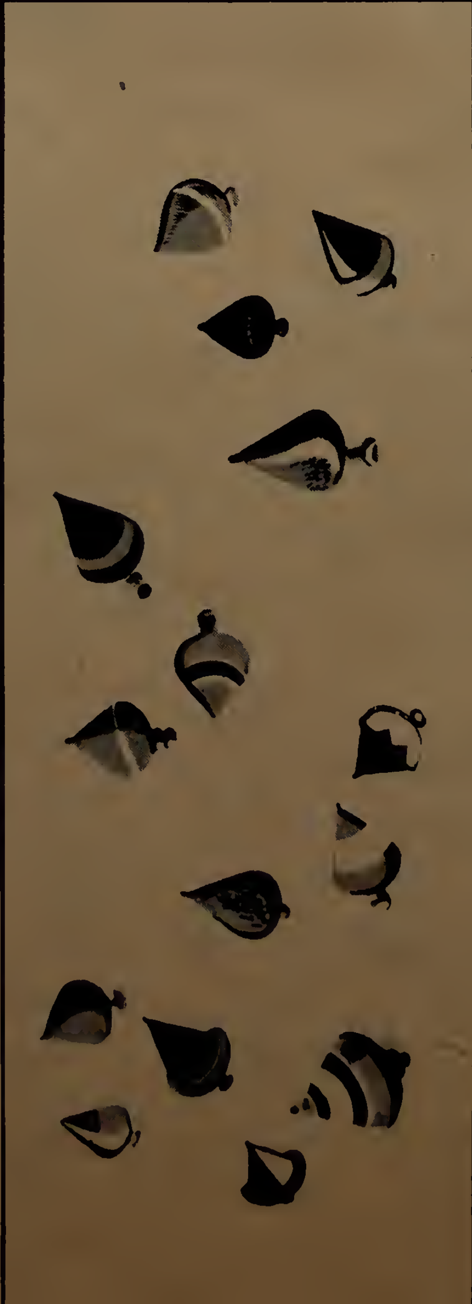
Matching Two to One and One to Two (Page 4 Numbers In Action) Let the children talk about the big picture at the left. Be sure they understand that only four of many children are shown. Get them to notice that the pictures at the right of the page show objects that are in the big picture. First have them make a one-to-one correspondence between objects in the big picture and similar objects in the small pictures as they did on page 1. Direct them to cross out any extra small objects. Let them decide for each of the small pictures whether there are to be two objects for each stick figure, or two stick figures for each object.

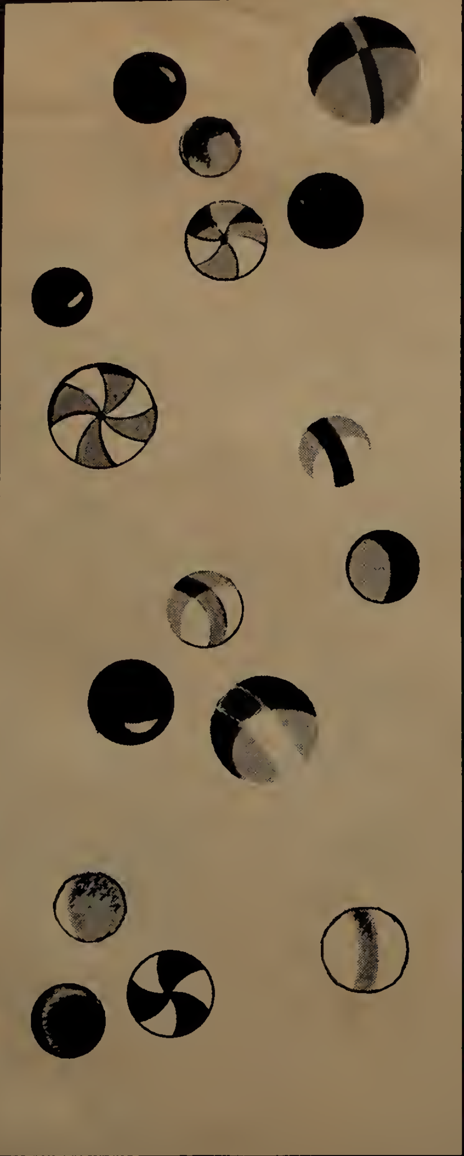
(Directions continued on page 129)

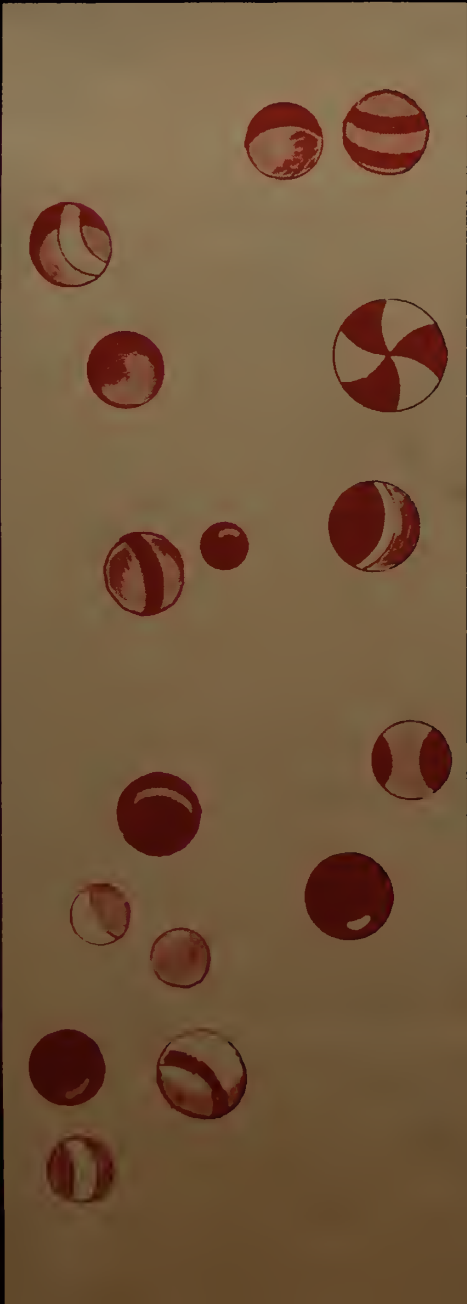
Recognizing Groups of 2, 3, and 4 (Page 5 **Numbers in Action**). Direct attention to the first picture of jacks. Tell the children to draw circles around groups of two jacks in such a way as to use up all the jacks. They must not use a jack more than once. They are to do the same with the red jacks. The tops are to be put into groups of three, and the balls into groups of four. The blocks are to be put into groups of two, three, and four. Direct the children to include groups of two, of three, and of four in **each picture of blocks.** Encourage them to plan the groups before they draw the circles so that in each picture no objects will be left over.

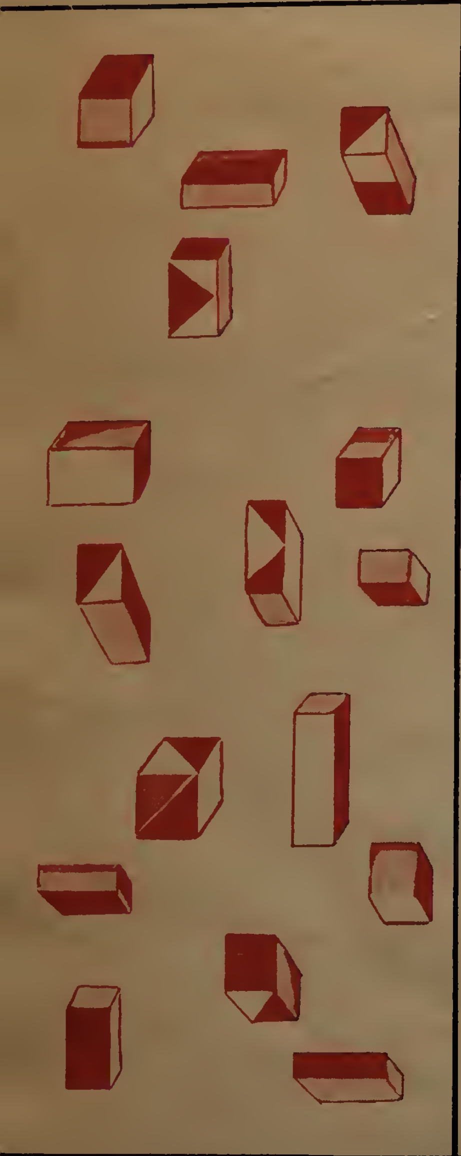








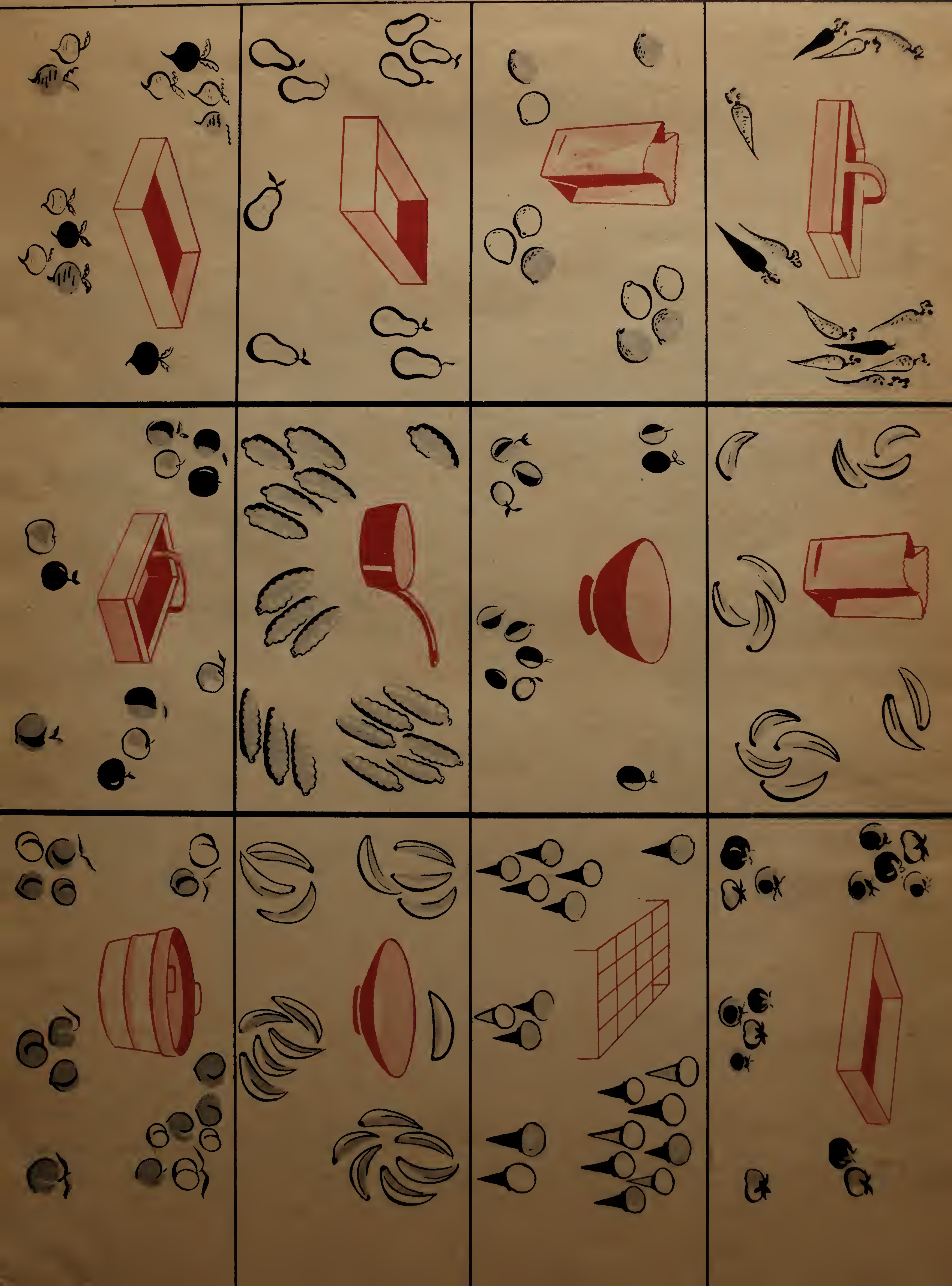


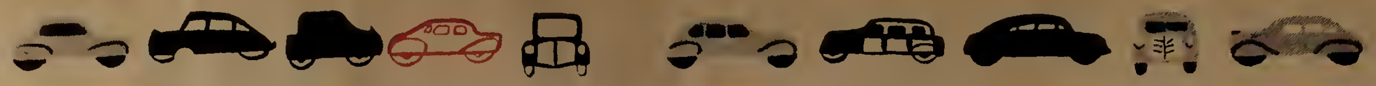


Recognizing Groups of 6, 8, and 10 (Page 6 **Numbers in Action**)

For the first picture say, "Just six of these ducks are to be in the pond." Decide which ducks you want in the pond but do not separate ducks that are together. Draw circles around the groups of ducks that you want in the pond. Sometimes you may draw a circle around one duck if it is alone. Now draw a line from each group you circled to the pond." In each of the other pictures in the first vertical strip the children are to put six objects on, or into, the flower, basket, and bird bath in the same way. In the middle vertical strip they are to arrange eight objects and in the right-hand vertical strip ten objects.

Recognizing Groups of 5, 7, and 9 (Page 7 **Numbers in Action**). The directions given for page 4 may be adapted to the work on this page. Here, however, the children are to circle groups to make five for the container in each picture in the vertical strip at the left; they are to circle groups to make seven for the container in each picture in the middle strip; and they are to circle groups to make nine for the container in each picture in the strip at the right. Be sure they understand that they can circle a single object if it is alone.



7	8		six	nine
6	10		four	five
2	3		ten	two
4	9		one	eight
5	1		three	seven
one	nine		5	8
ten	five		9	3
four	eight		1	6
two	three		7	4
six	seven		10	2
2	9		two	seven
10	1		five	four
4	8		eight	nine
7	3		ten	six
5	6		one	three
three	five		8	2
eight	nine		4	10
ten	six		1	5
one	four		3	9
seven	two		7	6
6	1		four	eight
3	10		six	ten
9	2		one	nine
7	5		five	seven
4	8		three	two

Positional Meaning of 1 to 10 (page 8 **Numbers in Action**) Direct attention to the picture of the toy cars and say: Put your finger on car 1, counting from the **left** [point to the left]. What number is the red car? Find its number here [point to the black numbers at the left] and draw a circle around it. Tell the children that for each of the other pictures they are to determine the number of the red toy and then encircle the correct black number or number word. When they have completed this work, direct attention to the pictures again and repeat the directions. This time, however, the children are to count the objects in each picture from (Directions continued on page 129)

Numbers 1 to 10 (Page 9 **Numbers in Action**). Say: "Look at the toy cars in the first picture. Without counting, decide how many toy cars there are. Find the red number in this picture that shows how many toy cars there are and draw a circle around it." The children should work in this way independently with the other pictures on the page. Be sure they do not count the objects.

7 1 4 9 6
10 3 2 5 8

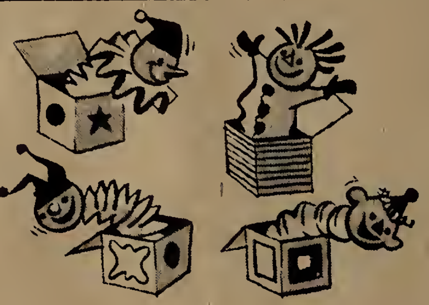
4 9 6 1 7
3 8 5 2 10

5 3 10 4 1
9 6 2 8 7

8 5 9 6 2
1 7 10 4 3

9 5 7 8 1
2 10 4 6 3

6 10 8 3 9
4 7 5 2 1

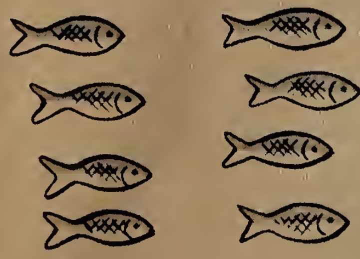


7 3 4 9 1
2 10 8 5 6

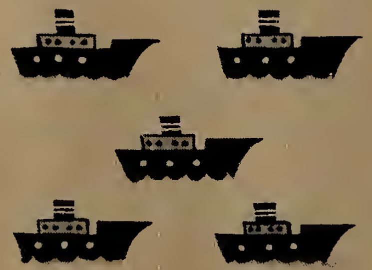
10 1 8 7 5
3 6 9 2 4

3 5 10 8 2
1 7 9 4 6

4 8 7 2 6
5 1 10 9 3

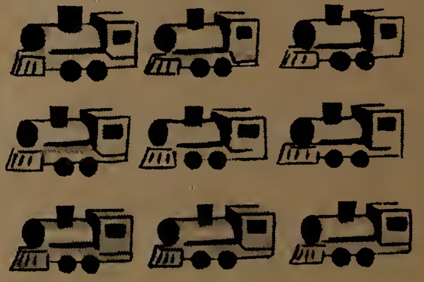


6 1 10 4 3
8 2 9 7 5



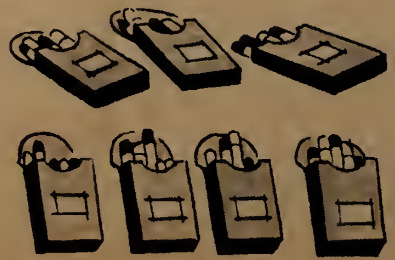
9 2 8 5 7
1 10 4 6 3

5 7 10 1 3
4 6 9 2 8



1 6 2 8 4
5 10 3 7 9

9 4 8 3 10
5 2 7 6 1



6 1 3 8 10
4 2 5 9 7

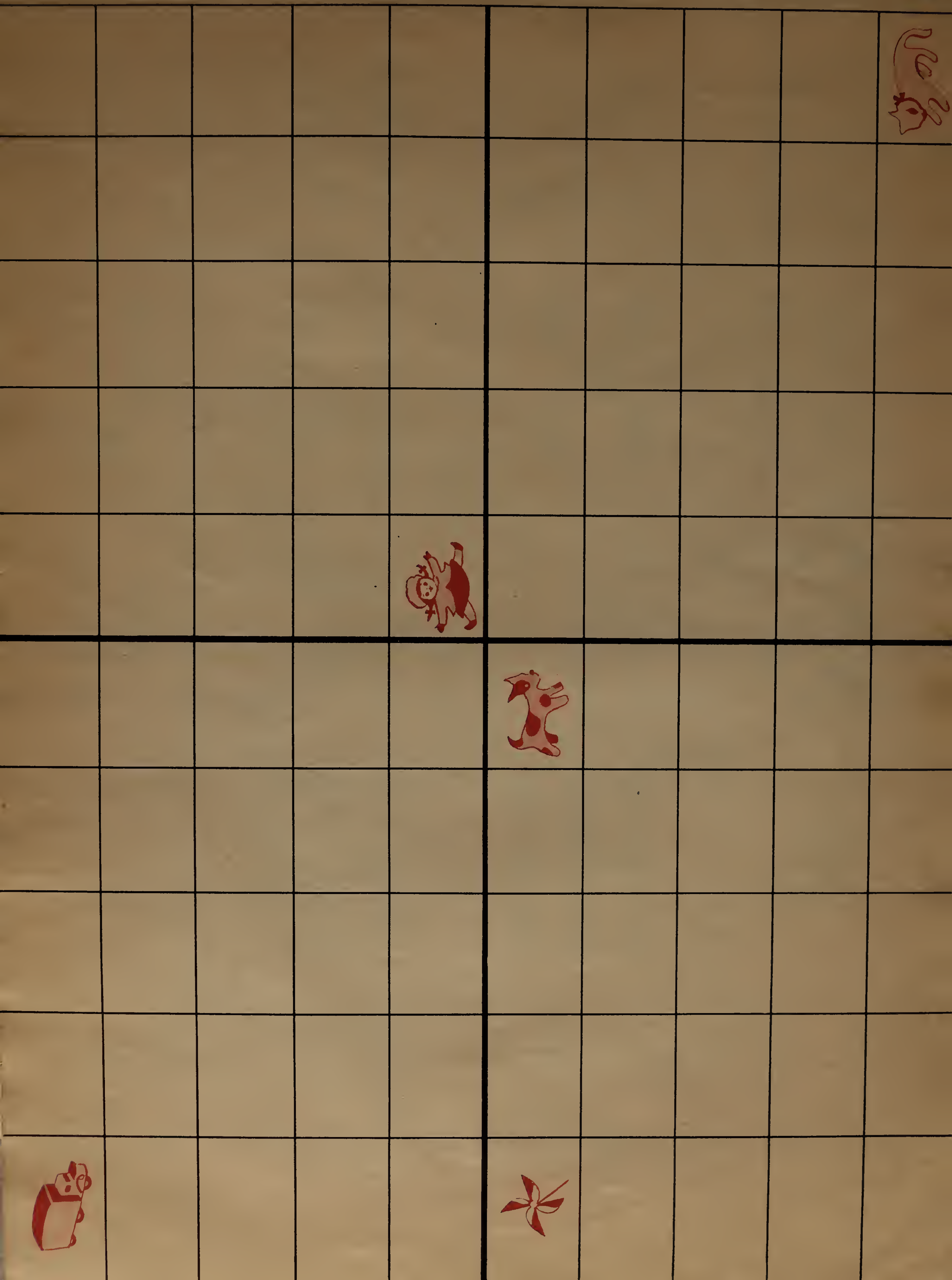
8 2 7 5 6
1 4 10 3 9

2 5 9 4 1
6 3 7 10 8

9 5 3 8 10
1 7 6 2 4

5 1 2 7 9
6 4 10 3 8

Positional Meaning of 1 to 10 (Page 10 **Numbers in Action**) Use the pictures on page 8 to help the children locate the rows and boxes from the top and the left—the doll is in Row 5, Box 6, the [illegible] is in Row 6, Box 1, etc. Then say: Look at the black numbers and the little pictures on page 9 [point to them]. The first one tells you to draw a balloon in Row 4, Box 2. Find Row 4, Box 2, and draw a balloon there. The next one tells you to find Row 9, Box 8, and draw a boat there. Draw the other pictures in the correct boxes. The column of exercises in black on page 9 may be used again, if desired. But this time direct the (Directions continued on page 129)



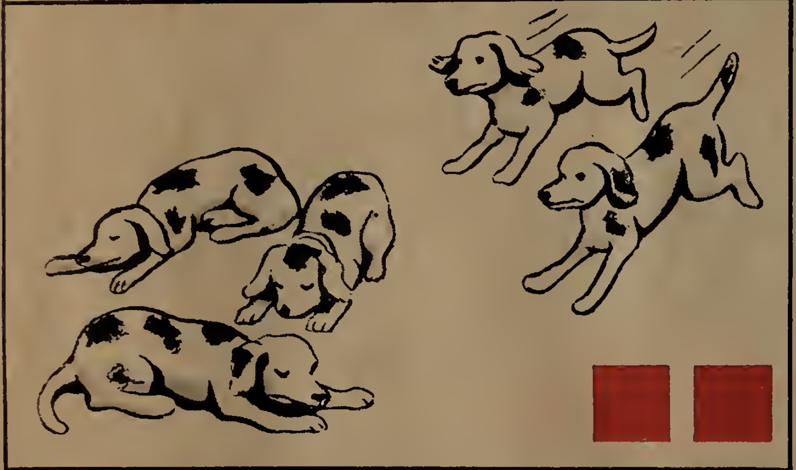
Counting Dimes, Nickels, and Pennies (Page 11 **Numbers in Action**). Say: "Look at the first picture [point to the toy car]. How much does the toy car cost? Below the car are some pictures of coins. The pennies have 1¢ written on them, the nickels have 5¢ written on them, and the dimes have 10¢ written on them. What coins are in this picture? Draw a circle around the coins that show just enough money to buy the toy car. For each of the other pictures, draw a circle around the coins that show just enough money to buy the toy in the picture.

If you prefer, you may have the children cross off coins so that just enough money is left to buy the toy pictured.

4	2	7	3
9	8	2	4
1	7	4	6
5	10	9	5
8	9	3	8
4	1	2	10
10	4	1	3
7	4	8	7
3	2	10	9
4	7	6	4
2	2	1	6
4	9	5	9
9	9	3	1
2	3	6	3
4	10	8	5

The 5 Group: Combining Two Groups (Page 13 **Numbers in Action**) Direct attention to the first row of pictures (the dogs). Say: "How many dogs are eating in the red picture? How many dogs are coming to eat? How many dogs will be eating when these dogs join the others? Now look at the picture at the right [point to it]. If this picture shows just five dogs eating, put this mark, X, in the red answer square. If it does not show just five dogs eating, put this mark, ≷ (scribble), in the answer square. Put the correct mark in the answer square for each of the pictures of the dogs." For the other three rows of pictures tell the children to look at (Directions continued on page 129)

The 5 Group: Symbolism of the Addition Basic Facts (Page 14 **Numbers in Action**). Direct attention to Problem A. Say: "Read Problem A. Find the picture that Problem A tells about. Write the letter **A** in one of the little red squares in the picture. Now look at Problem B. Find the picture that it tells about. Write the letter **B** in one of the little red squares in that picture. Do this for each of the problems." Explain that there are two little red squares for each picture because there are two problems about it.



A 3 dogs and 2 dogs are 5 dogs.

B 4 pigs plus 1 pig are 5 pigs.

C 1 pig and 4 pigs are 5 pigs.

D 1 dog plus 4 dogs is 5 dogs.

E 3 pigs and 2 pigs are 5 pigs.

F 2 dogs and 3 dogs are 5 dogs.

G 4 pigs and 1 pig are 5 pigs.

H 4 dogs plus 1 dog are 5 dogs.

I 2 pigs and 3 pigs are 5 pigs.

J 3 dogs plus 2 dogs are 5 dogs.

K 2 pigs plus 3 pigs are 5 pigs.

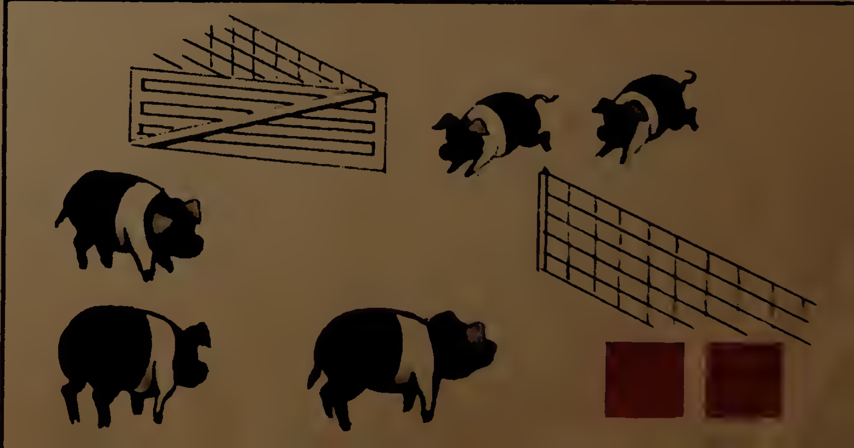
L 4 dogs and 1 dog are 5 dogs.

M 2 dogs plus 3 dogs are 5 dogs.

N 3 pigs plus 2 pigs are 5 pigs.

O 1 dog and 4 dogs are 5 dogs.

P 1 pig plus 4 pigs is 5 pigs.



The 5 Group: Separating Into Two Groups (Page 16 **Numbers in Action**) Say: "Look at the picture of the birds in the red strip. How many birds were there before some began to fly away? How many are flying away? How many will be left? Now look at each picture of birds at the right [point to them]. For each picture that shows just how many birds will be left, put this mark, X, in the red answer square. For each picture that does not show how many birds will be left, put this mark, ≷ (scribble), in the red answer square." The children should work independently with the remaining pictures on the page. Remind them that they are to do the work without counting.

The 5 Group: Symbolism of the Subtraction Basic Facts (Page 17 **Numbers in Action**). Get the children to notice that in each picture on this page one group of animals is going away. Say: "Look at Problem A [point to it]. Read it and then find the picture it tells about. Write the letter **A** in the little red answer square in the picture. Now read each of the other problems and find the picture it tells about. Write the letter that is beside the problem in the red answer square in the picture."

A 5 rabbits minus 4 rabbits are 1 rabbit.

B 5 dogs minus 3 dogs are 2 dogs.

C 5 pigs minus 1 pig are 4 pigs.

D 5 dogs minus 2 dogs are 3 dogs.

E 5 dogs minus 1 dog are 4. dogs.

F 5 pigs minus 4 pigs are 1 pig.

G 5 rabbits minus 1 rabbit are 4 rabbits.

H 5 pigs minus 3 pigs are 2 pigs.

I 5 rabbits minus 3 rabbits are 2 rabbits.

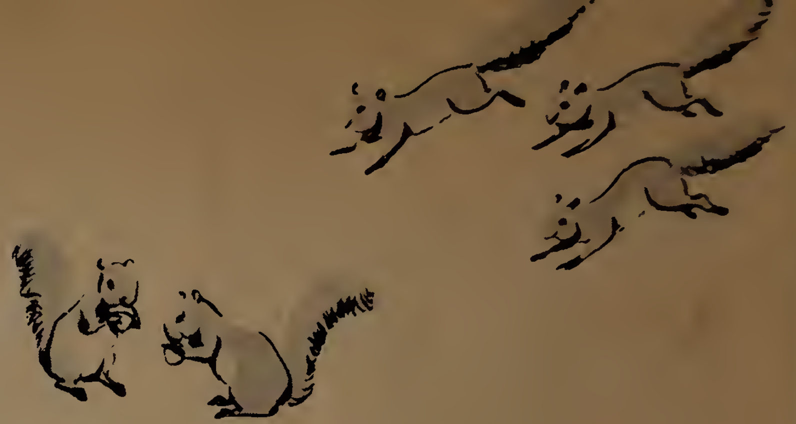
J 5 pigs minus 2 pigs are 3 pigs.

K 5 dogs minus 4 dogs are 1 dog.

L 5 rabbits minus 2 rabbits are 3 rabbits.

5 dogs minus 1 dog are 4 dogs.
4 dogs plus 1 dog are 5 dogs.

5 rabbits minus 2 rabbits are 3 rabbits.
3 rabbits plus 2 rabbits are 5 rabbits.



2 squirrels plus 3 squirrels are 5 squirrels.
5 squirrels minus 3 squirrels are 2 squirrels.

4 dogs plus 1 dog are 5 dogs.
5 dogs minus 1 dog are 4 dogs.

3 pigs plus 2 pigs are 5 pigs.
5 pigs minus 2 pigs are 3 pigs.

5 pigs minus 4 pigs are 1 pig.
1 pig plus 4 pigs is 5 pigs.

5 rabbits minus 3 rabbits are 2 rabbits.
2 rabbits plus 3 rabbits are 5 rabbits.

2 dogs plus 3 dogs are 5 dogs.
5 dogs minus 3 dogs are 2 dogs.

1 squirrel plus 4 squirrels is 5 squirrels.
5 squirrels minus 4 squirrels are 1 squirrel.

Pictorial Problem Situations (Page 18 **Numbers in Action**) Get the children to notice that in some pictures on this page a group of animals is joining another group, while in other pictures some of the animals are going away in a group. Say: Look at the first picture of the dogs. How many dogs are eating? Is the dog that is all by himself joining the others, or is he running away from them? Read the two problems printed in red in this picture. Which problem tells what is happening? The other problem is wrong; so draw a line through it to cross it off. For each of the other pictures decide what is happening. Then cross off the wrong problem.

Pictorial Problem Situations (Page 19 **Numbers in Action**). Have the children examine the first picture. Get them to decide whether the action shown is that of joining or of separating groups. Then tell them to read the two problems printed in red in the picture and decide which one tells what is happening. They are to write the number that shows the answer to the problem on the answer line in the correct problem. Also direct them to draw a line through the problem that does **not** show what is happening. This may be done before they write their response on the answer line of the correct problem. Let the children work independently with the remaining pictures on the page.

1 dog plus 4 dogs is ____ dogs.

5 dogs minus 4 dogs are ____ dog.

5 chickens minus 3 chickens are ____ chickens.

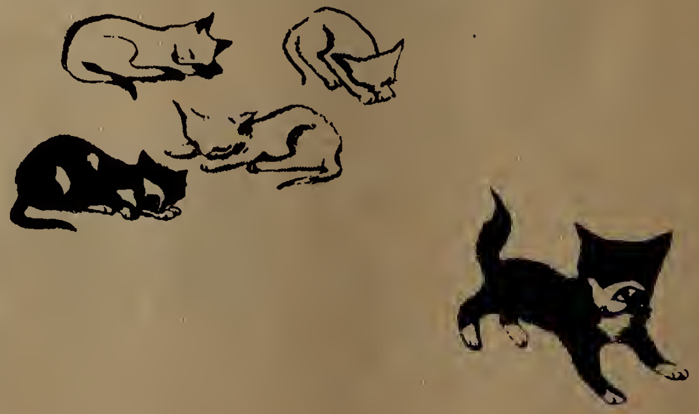
2 chickens plus 3 chickens are ____ chickens.

5 birds minus 3 birds are ____ birds

2 birds plus 3 birds are ____ birds.

1 bird plus 4 birds is ____ birds.

5 birds minus 4 birds are ____ bird.



4 kittens plus 1 kitten are ____ kittens.

5 kittens minus 1 kitten are ____ kittens.

4 chickens plus 1 chicken are ____ chickens

5 chickens minus 1 chicken are ____ chickens

5 kittens minus 2 kittens are ____ kittens.

3 kittens plus 2 kittens are ____ kittens.

4 birds plus 1 bird are ____ birds.

5 birds minus 1 bird are ____ birds.

5 dogs minus 2 dogs are ____ dogs

3 dogs plus 2 dogs are ____ dogs

2 chickens plus 1 chicken are ____ chickens.

3 chickens minus 1 chicken are ____ chickens.

3 birds plus 2 birds are ____ birds.

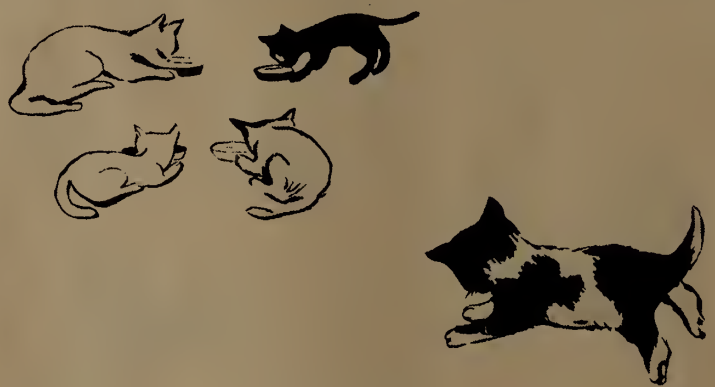
5 birds minus 2 birds are ____ birds.

5 dogs minus 3 dogs are ____ dogs.

2 dogs plus 3 dogs are ____ dogs.

3 dogs minus 2 dogs are ____ dog.

1 dog plus 2 dogs is ____ dogs.



5 kittens minus 1 kitten are ____ kittens.

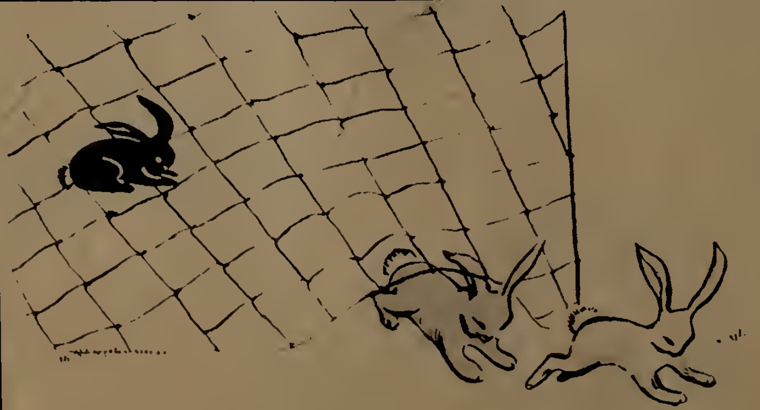
4 kittens plus 1 kitten are ____ kittens.

3 birds minus 1 bird are ____ birds.

2 birds plus 1 bird are ____ birds.

5 kittens minus 4 kittens are ____ kitten.

1 kitten plus 4 kittens is ____ kittens.



1 rabbit plus 2 rabbits is ____ rabbits.

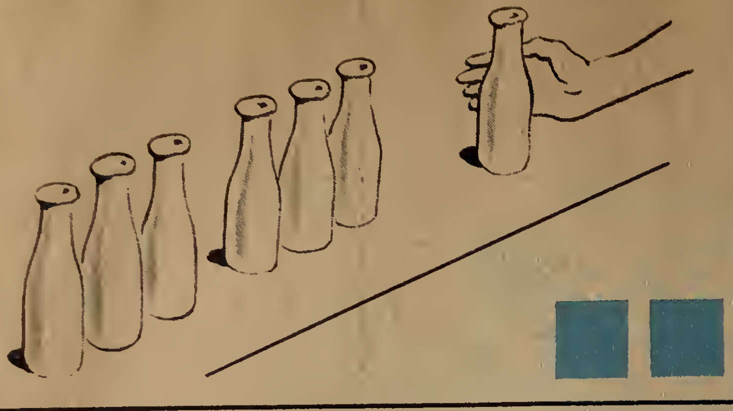
3 rabbits minus 2 rabbits are ____ rabbit.

3 chickens minus 2 chickens are ____ chicken

1 chicken plus 2 chickens is ____ chickens

The 3 Group: Actions; Symbolism (Pages 20-21 **Numbers in Action**). The directions for page 15 may be adapted to the work on this page. Tell the children that for each picture they are first to decide whether the joining or the separating of groups is shown. Then they are to select the problem printed in red that tells what is happening in the picture. Finally they are to write the answer to the correct problem on the answer line and also draw a line through the incorrect problem to cross it off.

The 7 Group: Combining Two Groups (Page 23 **Numbers in Action**). The directions for page 10 may be adapted to this page. That is, have the children look first at the blue picture in each picture strip and determine how many objects there will be in all when the action has been completed. Be sure they do this by recognizing groups, not by counting. Then for each picture at the right of the blue one have them put this mark, X, in the blue answer square if the picture shows the correct number of objects for the **completed action,** and this mark, ≷ (scribble), if the picture does not show the correct number of objects. Let the children work independently as much as possible.



A 5 bottles plus 2 bottles are ___ bottles.

B 5 oranges and 2 oranges are ___ oranges.

C 3 bottles and 4 bottles are ___ bottles.

D 3 oranges plus 4 oranges are ___ oranges.

E 4 bottles plus 3 bottles are ___ bottles.

F 5 bottles and 2 bottles are ___ bottles.

G 1 orange and 6 oranges are ___ oranges.

H 6 bottles plus 1 bottle are ___ bottles.

I 4 bottles and 3 bottles are ___ bottles.

J 2 oranges plus 5 oranges are ___ oranges.

K 5 oranges plus 2 oranges are ___ oranges.

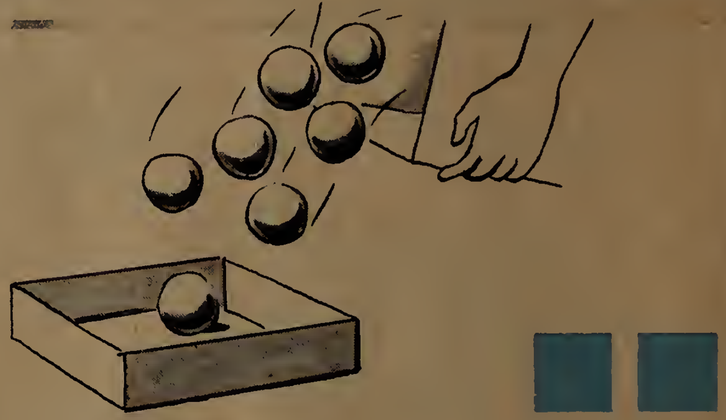
L 6 bottles and 1 bottle are ___ bottles.

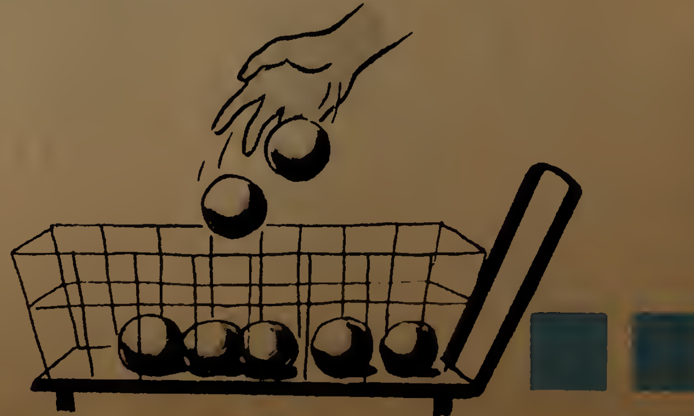
M 2 oranges and 5 oranges are ___ oranges.

N 3 oranges and 4 oranges are ___ oranges.

O 3 bottles plus 4 bottles are ___ bottles.

P 1 orange plus 6 oranges is ___ oranges.





The 7 Group: Symbolism of the Addition Basic Facts (Page 24 **Numbers in Action**) Adapt the directions given for page 11 to this page. Have the children read Problem A, find the picture that Problem A tells about, and write the letter **A** in one of the blue answer squares in the picture. They are then to write the answer to Problem A on the blue line. For Problem B they should find the picture that it tells about, write **B** in one of the answer squares, and write the answer to the problem on the answer line. They are to do this for each problem. Be sure they understand that there are two answer squares for each picture because there are two problems about it.

The 7 Group: Separating into Two Groups (Page 26 **Numbers in Action**). Direct attention to the first picture in the blue strip at the top. Say: "How many bags of candy were on the shelf before any were taken off? How many bags were taken? How many will be left? Now look at each of the white pictures under the heavy line. For each picture that shows how many bags will be left in Picture A, write the letter **A** in the blue answer square." Give similar directions for Picture B. Let the children work independently on Pictures C, D, E, and F.

A 7 cans minus 1 can are____ cans.

B 7 boxes minus 5 boxes are____ boxes.

C 7 boxes minus 1 box are____ boxes.

D 7 boxes minus 3 boxes are____ boxes.

E 7 cans minus 5 cans are____ cans.

F 7 cans minus 2 cans are____ cans.

G 7 cans minus 4 cans are____ cans.

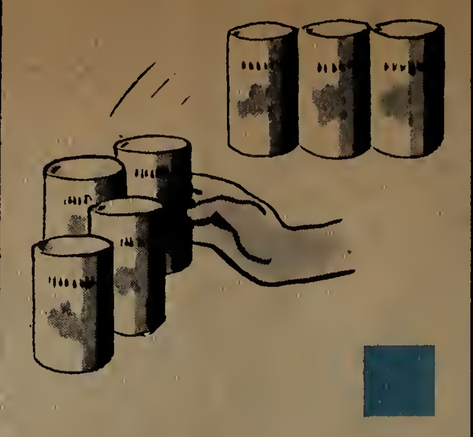
H 7 boxes minus 4 boxes are____ boxes.

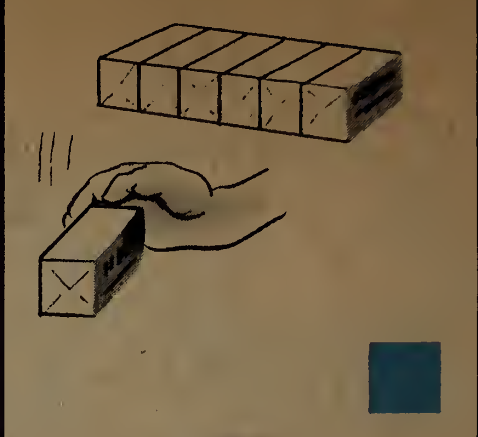
I 7 cans minus 3 cans are____ cans.

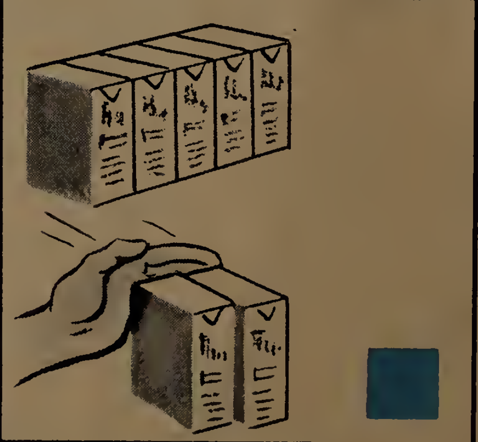
J 7 cans minus 6 cans are____ can.

K 7 boxes minus 6 boxes are____ box.

L 7 boxes minus 2 boxes are____ boxes.





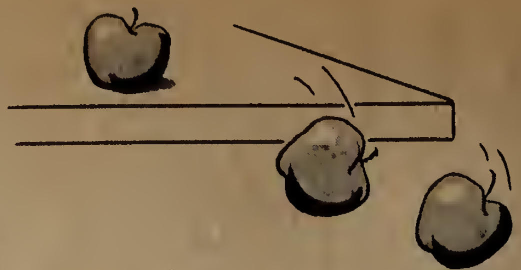


The 7 Group: Symbolism of the Subtraction Basic Facts (Page Numbers in Action) Say: Look at Problem A (point to it). Find the picture it tells about. Write the letter **A** in the little blue square in the picture. Write the answer to Problem A on the blue line in Problem A (point to the answer line). Now look at Problem B. Find the picture this problem tells about and write the letter **B** in the blue square. Write the answer to Problem B on the blue line. Do these same things for each of the other problems.

Pictorial Problem Situations (Page 28 **Numbers in Action**). In the first picture let the children decide whether a group of cans is being separated from the cans shown or is being joined to another group. Say: "Find the words **plus** and **minus** printed in blue in this picture. Decide which word tells what is happening. Cross out the other word. Then on the blue answer line write the number that tells how many cans there will be in all when the one can has been put with the others. In the next picture (the apples) find the word that tells what is happening and cross out the other word. Write the correct number on the answer line. Do these same things for each of the other pictures."


plus minus

____ cans


plus minus

____ apple


plus minus

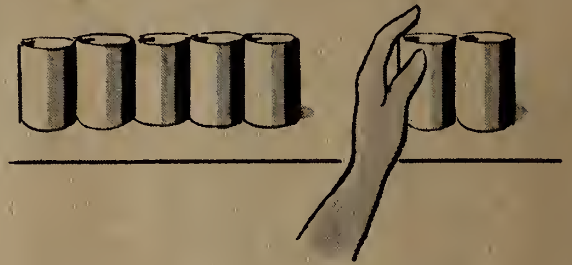
____ oranges


plus minus

____ bottles


plus minus

____ bottles


plus minus

____ cans


plus minus

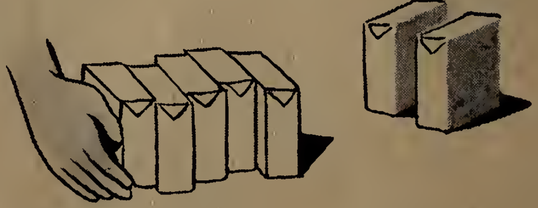
____ cans


plus minus

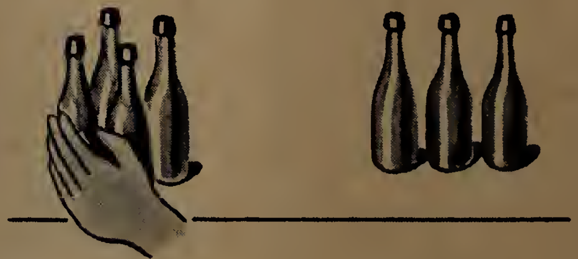
____ apples


plus minus

____ orange


plus minus

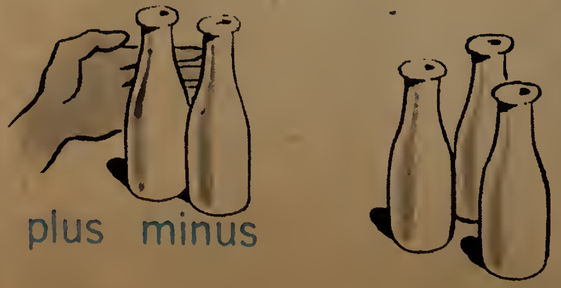
____ boxes


plus minus

____ bottles


plus minus

____ boxes


plus minus

____ bottles


plus minus

____ boxes


plus minus

____ oranges


plus minus

____ apples

A 3 bags plus 4 bags are ____ bags.

B 1 box plus 2 boxes is ____ boxes.

C 7 bags minus 5 bags are ____ bags.

D 3 bags minus 2 bags are ____ bag.

E 2 bags plus 5 bags are ____ bags.

F 1 box plus 6 boxes is ____ boxes.

G 2 bags plus 3 bags are ____ bags.

H 4 boxes plus 3 boxes are ____ boxes.

I 7 boxes minus 3 boxes are ____ boxes.

J 5 boxes minus 2 boxes are ____ boxes.

K 3 bags plus 2 bags are ____ bags.

L 5 bags minus 4 bags are ____ bag.

M 7 bags minus 4 bags are ____ bags.

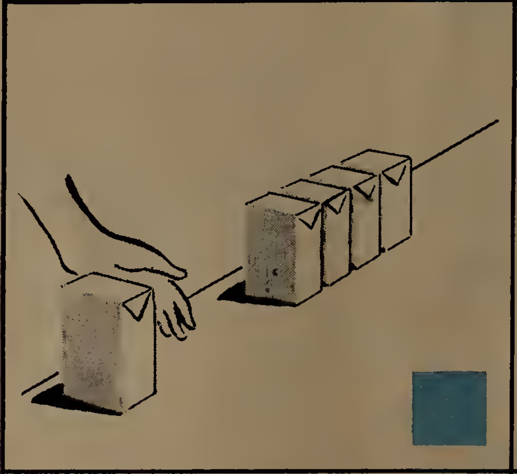
N 5 boxes minus 3 boxes are ____ boxes.

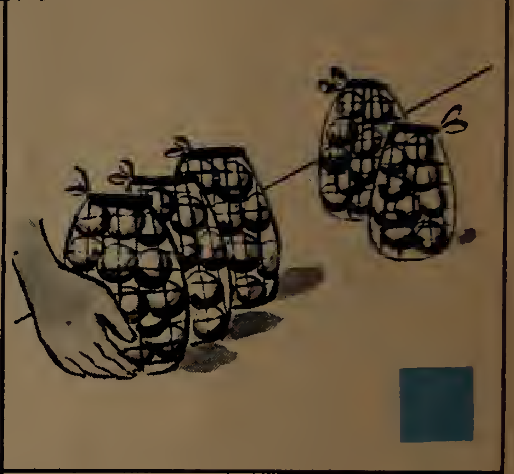
O 4 bags plus 1 bag are ____ bags.

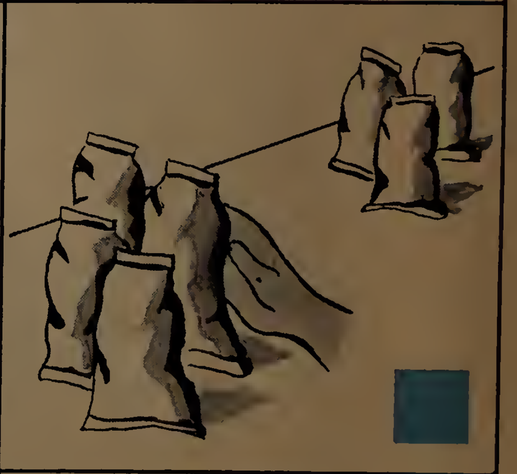
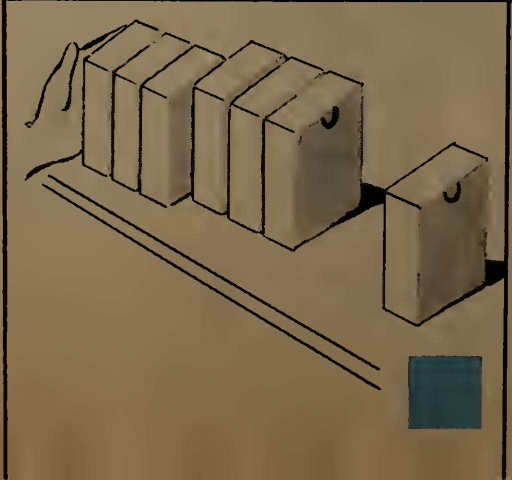
P 5 boxes minus 1 box are ____ boxes.

Q 7 boxes minus 2 boxes are ____ boxes.





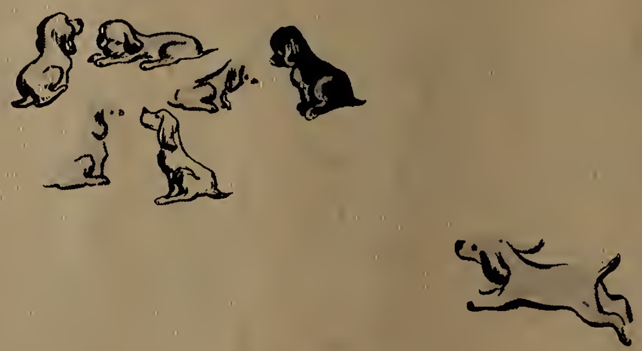
Pictorial Problem Situations (Page 29 **Numbers in Action**). Point to Problem A and say: "Read Problem A to yourselves. Now find the picture that Problem A tells about. Write the letter **A** in the blue answer square in the picture. Then write the answer to Problem A on the blue answer line in the problem [point to the line]. Do these same things for each of the other problems and pictures on this page. When there is no picture for a problem, just write the answer to the problem on the blue answer line."

Introduction of the Plus Sign (Page 30 **Numbers in Action**). Tell the children to look at the first picture (the girls) and also at the three problems under the picture. Say: "The picture will help you decide which numbers belong on the answer lines in the problems. Decide which numbers belong on the answer lines in the first problem. Write these numbers where they belong. Look at the next problem and write the correct numbers on the answer lines. Now look at the last problem in this picture. The picture shows that you should write the sign, +, between the 4 and the 3. Why? Write this sign where it belongs and then write the (Directions continued on page 127)

4 girls plus ____ girls are ____ girls.
4 plus ____ is ____.
4 ____ 3 is ____.

5 boys plus ____ boys are ____ boys.
5 plus ____ is ____.
5 ____ 2 is ____.

3 birds plus ____ birds are ____ birds.
3 plus ____ is ____.
3 ____ 2 is ____.



6 dogs plus ____ dog are ____ dogs.
6 plus ____ is ____.
6 ____ 1 is ____.

1 pig plus ____ pigs is ____ pigs.
1 plus ____ is ____.
1 ____ 2 is ____.

3 birds plus ____ birds are ____ birds.
3 plus ____ is ____.
3 ____ 4 is ____.

A 4 dolls plus 1 doll are ____ dolls.

4 ____ 1 is ____.

B 2 pigs plus 3 pigs are ____ pigs.

2 ____ 3 is ____.

C 1 bird plus 6 birds is ____ birds.

1 ____ 6 is ____.

D 2 apples plus 1 apple are ____ apples.

2 ____ 1 is ____.

E 1 boat plus 4 boats is ____ boats.

1 ____ 4 is ____.

F 2 toys plus 5 toys are ____ toys.

2 ____ 5 is ____.

G 3 cars plus 2 cars are ____ cars.

3 ____ 2 is ____.

H 5 balls plus 2 balls are ____ balls.

5 ____ 2 is ____.

3 boys minus 1 boy are ____ boys.

3 minus ____ is ____.

3____1 is ____.

7 girls minus 4 girls are ____ girls.

7 minus ____ is ____.

7____4 is ____.

5 dogs minus 2 dogs are ____ dogs.

5 minus ____ is ____.

5____2 is ____.

7 birds minus 5 birds are ____ birds.

7 minus ____ is ____.

7____5 is ____.

7 birds minus 3 birds are ____ birds.

7 minus ____ is ____.

7____3 is ____.

5 pigs minus 4 pigs are ____ pig

5 minus ____ is ____.

5____4 is ____.

A 3 dogs minus 1 dog are ____ dogs.

3____1 is ____.

B 7 pigs minus 6 pigs are ____ pig.

7____6 is ____.

C 5 birds minus 4 birds are ____ bird.

5____4 is ____.

D 7 boys minus 4 boys are ____ boys.

7____4 is ____.

E 5 boys minus 1 boy are ____ boys.

5____1 is ____.

F 7 dogs minus 2 dogs are ____ dogs.

7____2 is ____.

G 5 boys minus 3 boys are ____ boys.

5____3 is ____.

H 7 pigs minus 1 pig are ____ pigs.

7____1 is ____.

Introduction of the Minus Sign (Page 31 **Numbers in Action**). Adapt the directions given for page 23 to the work on this page. For the three problems in each picture have the children write the numbers that belong on the answer lines. In the third problem in each picture the children are also to supply the minus sign to indicate the separating action shown in the picture. Later they are to do the problems (blue letters A to H) at the right. Be sure they understand that there are no pictures to accompany these problems. In the first part of each problem they are to supply the answer. In the second part they are to supply both the correct sign and the answer.

Pictorial Problem Situations and Practice (Page 32 **Numbers in Action**). The directions given for pages 23 and 24 may be adapted to the work on this page. Here, however, since the children must distinguish between joining and separating action in a picture before they know whether to use the plus or the minus sign in the problem, it is advisable to work through the first **two** pictures before you expect the children to proceed independently. Be sure they understand that there are no pictures to accompany Problems A to H at the right.

3 pigs minus ____ pig are ____ pigs.

3 minus ____ is ____.

3 ____ 1 is ____.

5 birds plus ____ birds are ____ birds.

5 plus ____ is ____.

5 ____ 2 is ____.

6 pigs plus ____ pig are ____ pigs.

6 plus ____ is ____.

6 ____ 1 is ____.

7 dogs minus ____ dogs are ____ dogs.

7 minus ____ is ____.

7 ____ 5 is ____.

5 dogs minus ____ dogs are ____ dogs.

5 minus ____ is ____.

5 ____ 3 is ____.

2 birds plus ____ birds are ____ birds.

2 plus ____ is ____.

2 ____ 3 is ____.

A 7 toys minus 3 toys are ____ toys.

7 ____ 3 is ____.

B 2 boats plus 5 boats are ____ boats.

2 ____ 5 is ____.

C 4 boxes plus 1 box are ____ boxes.

4 ____ 1 is ____.

D 5 bags minus 2 bags are ____ bags.

5 ____ 2 is ____.

E 3 cans plus 2 cans are ____ cans.

3 ____ 2 is ____.

F 5 plants minus 1 plant are ____ plants.

5 ____ 1 is ____.

G 7 balls minus 1 ball are ____ balls.

7 ____ 1 is ____.

H 4 cars plus 3 cars are ____ cars.

4 ____ 3 is ____.

Pictorial Problems for the 3, 5, and 7 Groups (Page 33 Numbers in Action) Say: Look at Problem A [point to it]. Find the picture it belongs with. Write the letter **A** in the little blue square in that picture. Write the answer for Problem A on the blue line [point to the answer line]. Now look at Problem B. Find the picture it belongs with, write the letter **B** in the blue square, and *write* the answer on the blue line. Do these same things for each of the other problems. If there isn't a picture for a problem, just write the answer on the blue line.

A 3+2 is_____.

B 7−2 is_____.

C 5−1 is_____.

D 3+4 is_____.

E 4+1 is_____.

F 7−1 is_____.

G 7−5 is_____.

H 6+1 is_____.

I 7−3 is_____.

J 5−3 is_____.

K 2+1 is_____.

L 2+5 is_____.

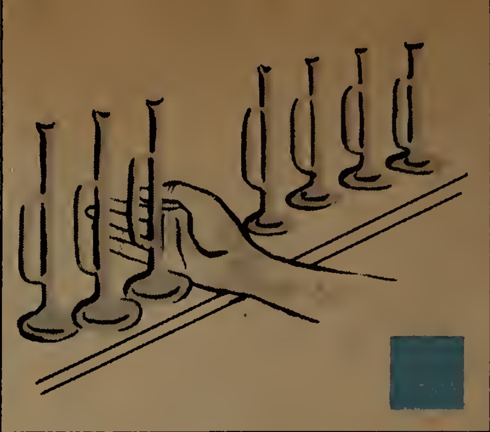
M 3−2 is_____.

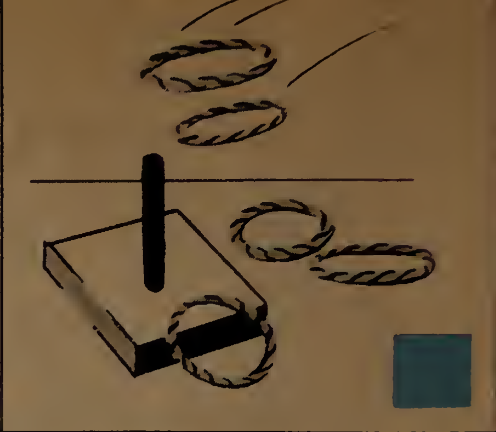
N 4+3 is_____.

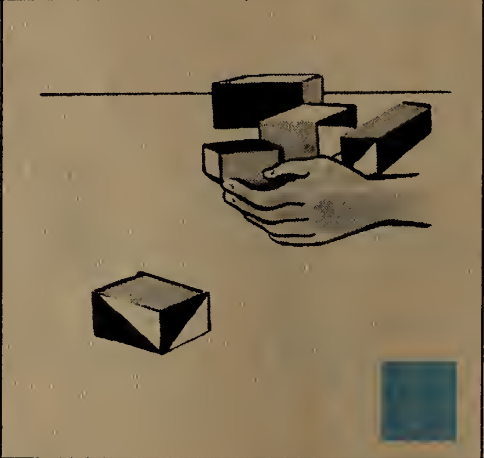
O 7−4 is_____.

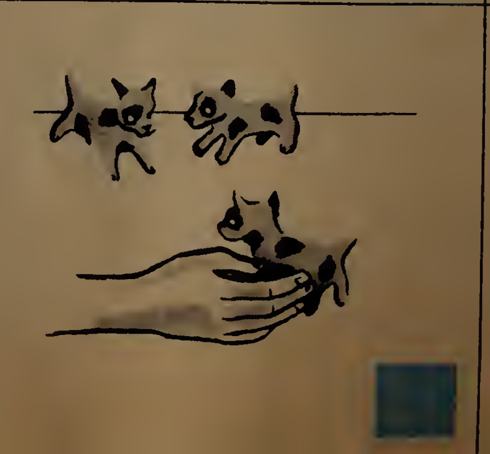
P 5+2 is_____.

Q 5−4 is_____.









Practice on the 3, 5, and 7 Groups (Page 33 **Numbers in Action**). Direct attention to the problem with blue letters (A to Q). Tell the children to read each problem and to write its answer on the blue answer line. Deal with the problems with gray letters and those with black letters in the same way. Encourage the children to work independently as much as possible, but do not expect them to do all the problems in any one class period. Children who have trouble may be permitted to use markers, if they wish, to find the answers.

A 1 dog plus 1 dog is ____ dogs.

B 7 pigs minus 2 pigs are ____ pigs.

C 5 rabbits minus 3 rabbits are ____ rabbits.

D 2 balls plus 3 balls are ____ balls.

E 7 cars minus 1 car are ____ cars.

F 3 boys minus 1 boy are ____ boys.

G 1 doll plus 6 dolls is ____ dolls.

H 4 girls plus 3 girls are ____ girls.

I 7 birds minus 4 birds are ____ birds.

J 5 toys minus 1 toy are ____ toys.

K 2 kittens plus 1 kitten are ____ kittens.

L 5 apples minus 4 apples are ____ apple.

M 6 oranges plus 1 orange are ____ oranges.

N 1 boat plus 4 boats is ____ boats.

O 7 boxes minus 5 boxes are ____ boxes.

P 1 plant plus 2 plants is ____ plants.

Q 7 apples minus 3 apples are ____ apples.

A 5 plus 2 is ____.

B 2 plus 3 is ____.

C 2 minus 1 is ____.

D 1 plus 4 is ____.

E 5 minus 3 is ____.

F 7 minus 6 is ____.

G 7 minus 2 is ____.

H 1 plus 6 is ____.

I 4 plus 3 is ____.

J 3 minus 2 is ____.

K 5 plus 2 is ____.

L 7 minus 1 is ____.

M 5 minus 2 is ____.

N 1 plus 1 is ____.

O 3 plus 4 is ____.

P 7 minus 5 is ____.

Q 5 minus 4 is ____.

A 2+3 is ____

B 7−6 is ____

C 3−1 is ____

D 6+1 is ____

E 5−3 is ____.

F 7−2 is ____.

G 1+2 is ____.

H 5−1 is ____.

I 3−2 is ____.

J 2+5 is ____.

K 1+1 is ____.

L 7−3 is ____.

M 1+6 is ____.

N 4+3 is ____.

O 5+2 is ____

P 2−1 is ____

Q 3+4 is ____

add

subtract

____ rabbits

add

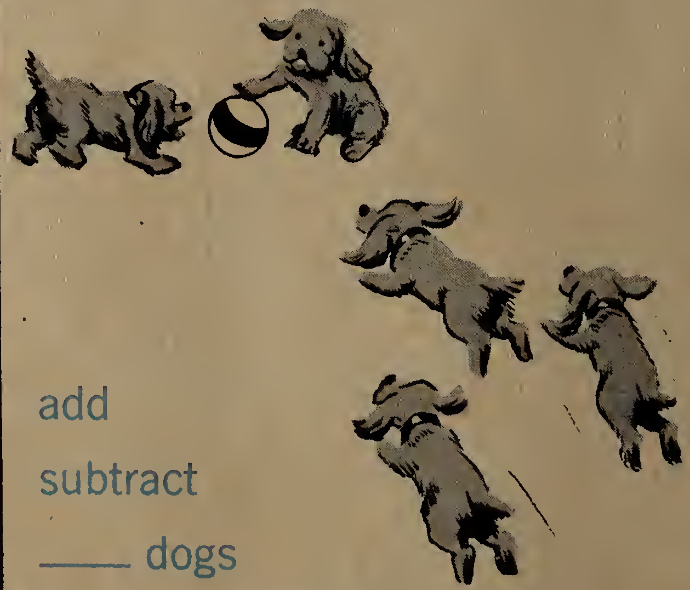
subtract

____ kittens

add

subtract

____ chicken



add

subtract

____ dogs

add

subtract

____ pigs

add

subtract

____ birds

A 2 cars plus 1 car are ____ cars.
Add 2 and 1. 2+1 is ____.
Subtract 1 from 2. 2−1 is ____.

B 3 balls plus 2 balls are ____ balls.
Add 3 and 2. 3+2 is ____.
Subtract 2 from 3. 3−2 is ____.

C 5 boats minus 2 boats are ____ boats.
Add 5 and 2. 5+2 is ____.
Subtract 2 from 5. 5−2 is ____.

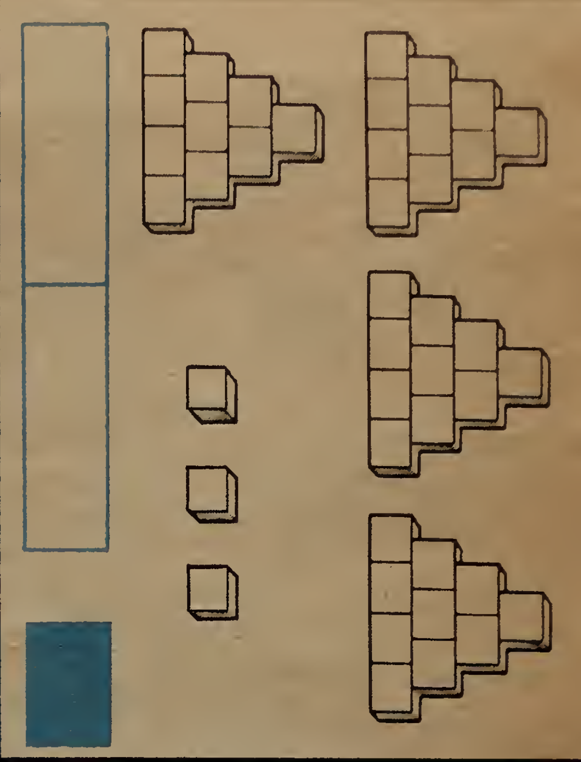
D 3 books minus 2 books are ____ book.
Add 3 and 2. 3+2 is ____.
Subtract 2 from 3. 3−2 is ____.

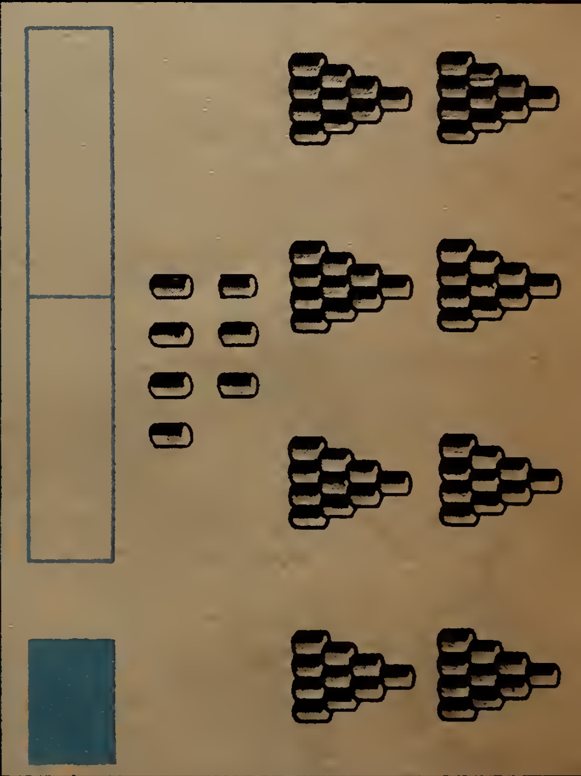
E 5 dogs plus 2 dogs are ____ dogs.
Add 5 and 2. 5+2 is ____.
Subtract 2 from 5. 5−2 is ____.

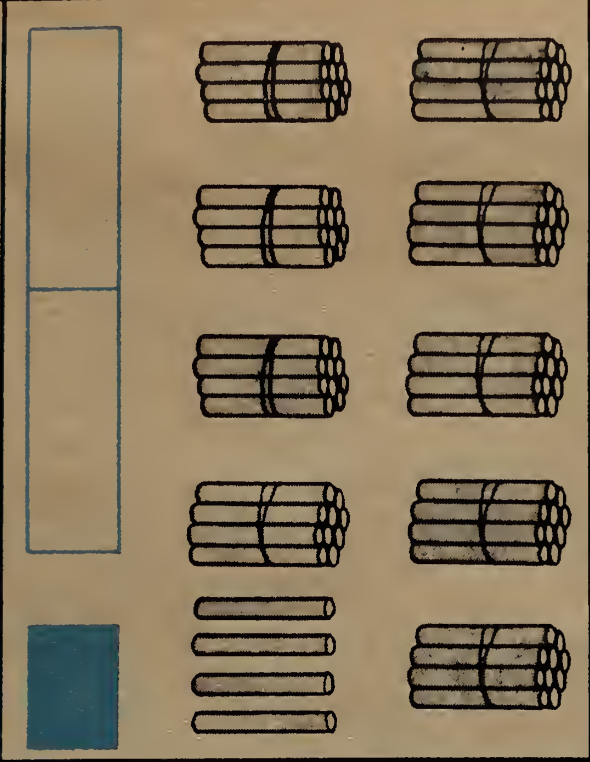
F 2 dolls minus 1 doll are ____ doll.
Add 2 and 1. 2+1 is ____.
Subtract 1 from 2. 2−1 is ____.

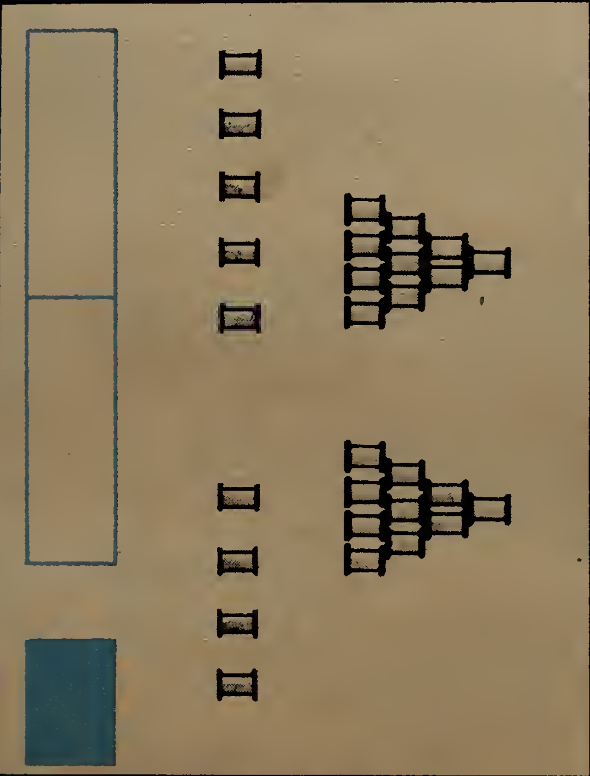
Introduction of Terms Add and Subtract (Page 14 **Numbers in Action**) Direct attention to the first picture and get the children to say that one rabbit is running to join the rabbit that is eating. Say "How many rabbits in all will be eating when this rabbit joins the other one?" Find the words **add** and **subtract** printed in blue in this picture. One of these words tells what is happening in the picture. Cross out the word that does not belong with the picture. Now on the blue answer line write the number that tells how many rabbits in all will be eating. Do these same things for each of the other pictures. Be sure to cross out the word. (Directions continued on page 127)

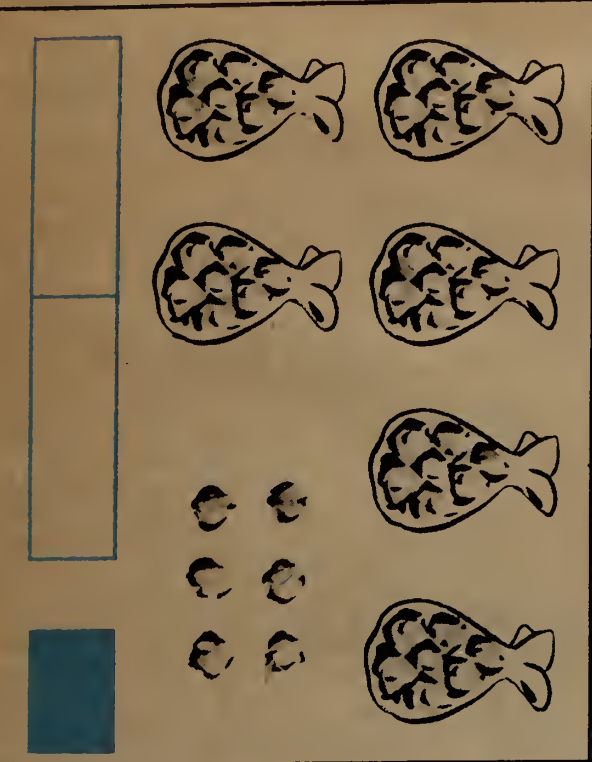
Grouping by Tens and Ones; Writing Numbers to 99 (Page 37 **Numbers in Action**). Direct attention to the pictures and have the children notice that some objects are in groups of ten, while others are not. Say: "Look at the blocks in the first picture. How many blocks are in each pile? On the left side of the white answer strip [point to it] make one tally mark for each pile of ten blocks. How many blocks are **not** in piles of ten? On the right side of the answer strip make one tally mark for each of these blocks. Decide how many blocks there are in the picture and write this number in the blue answer box." Work in this way with each of the other pictures.

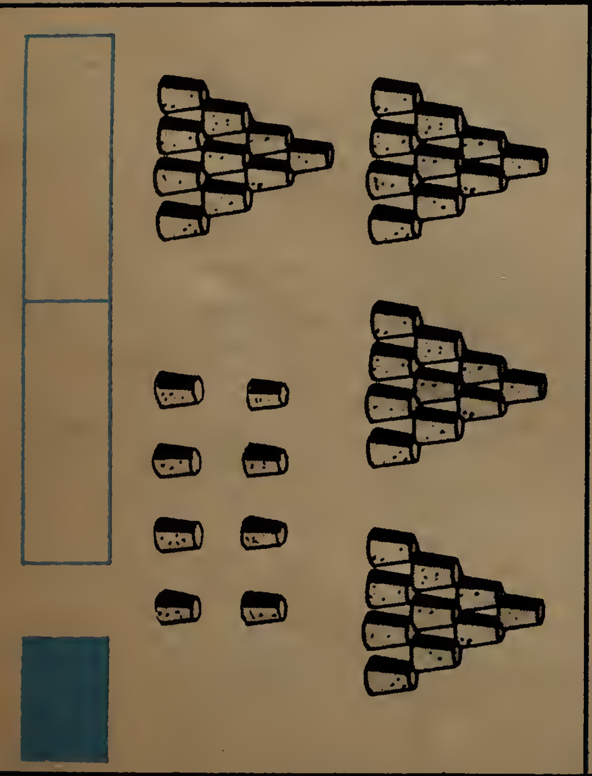


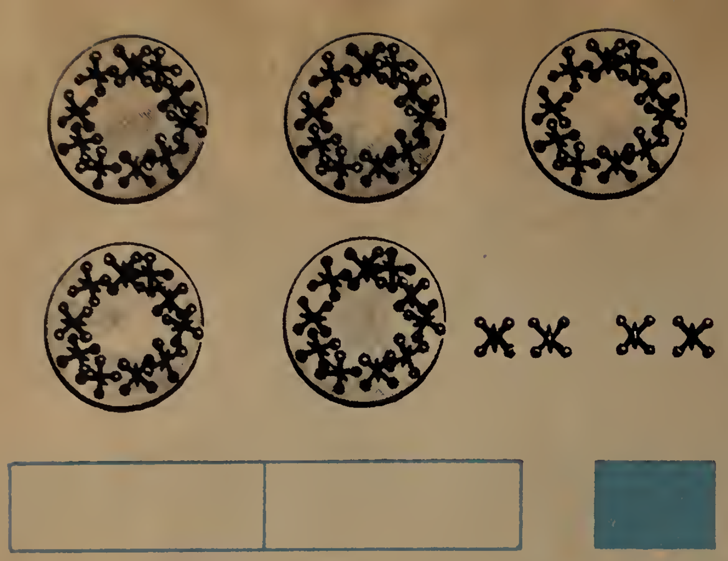


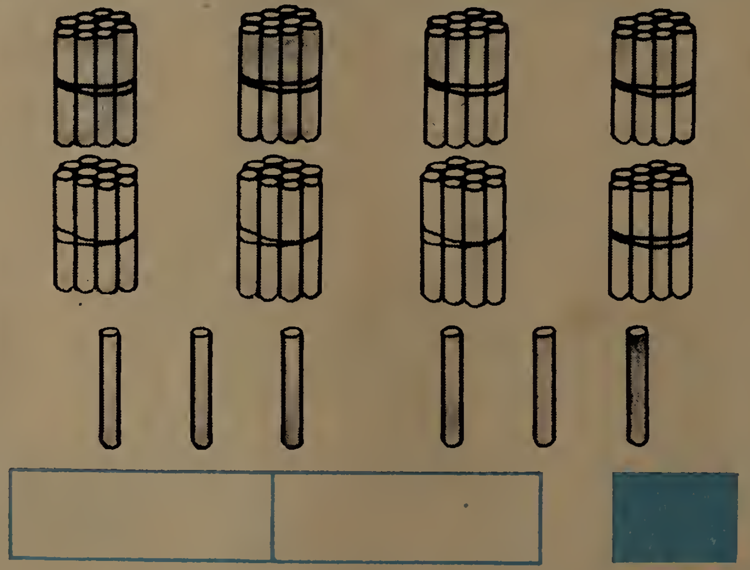


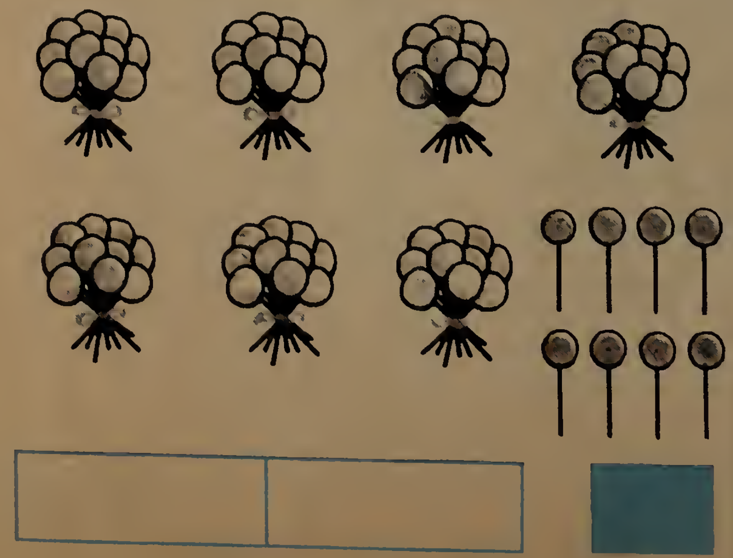


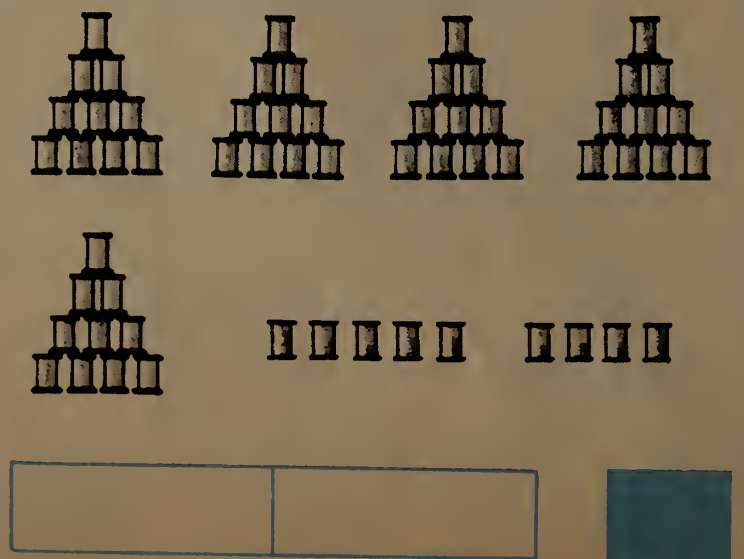








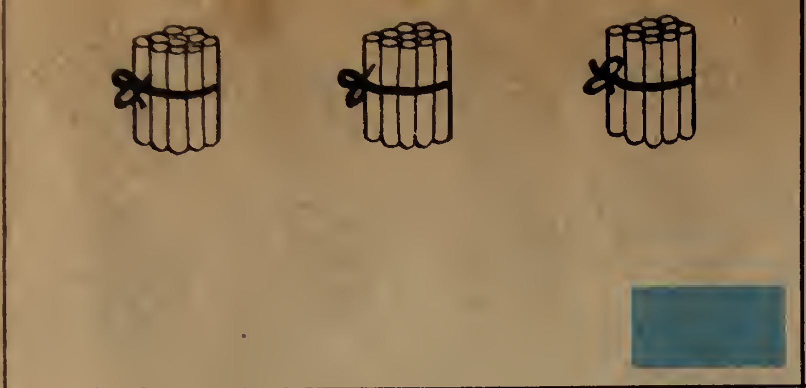
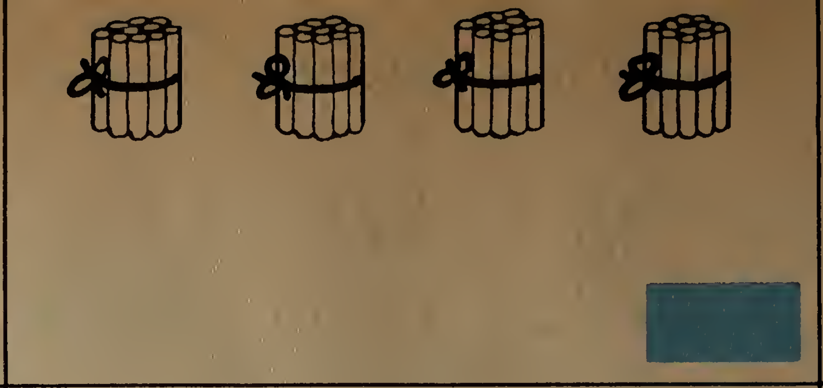




Grouping by Tens and Ones; Writing Numbers to 99 (Page 37 Numbers in Action) The directions given for page 29 may be adapted for use with this page. For each picture the children are to make tally marks for the tens in the left part of the white answer strip and for the ones in the right part. Then they are to write in the blue answer block the number that shows how many objects are in the picture. Be sure the children accept without counting the bags, bundles, etc., as containing ten objects each.

Symbolism of the Decade Numbers (Page 38 **Numbers in Action**).

Say: "There are ten sticks in each bundle of sticks. There should be just ten sticks in the first picture, twenty in the next, and so on, up to ninety. Are there more or fewer than ten sticks in the first picture? Cross off enough bundles so the picture will show just ten sticks and write the number 10 in the blue answer block. The next picture to the right [point to it] should show how many sticks? Cross off enough bundles so this picture will show just twenty sticks and write 20 in the answer block. Fix each of the other pictures so that each one shows ten more sticks than the picture (Directions continued on page 27)

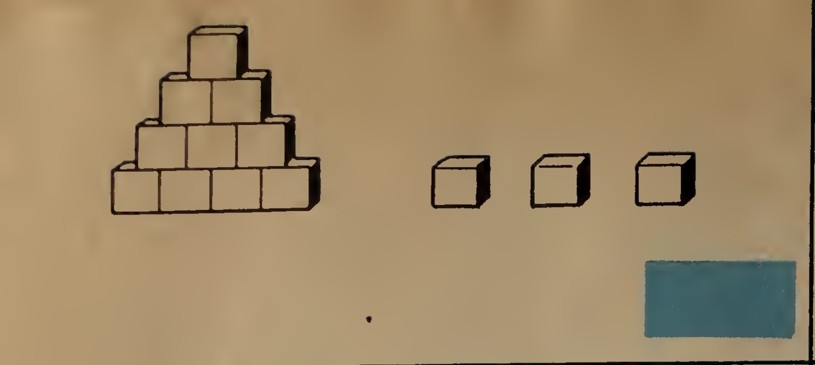



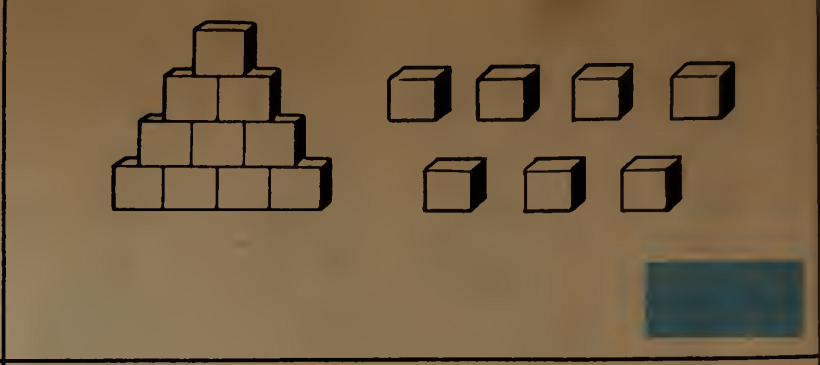


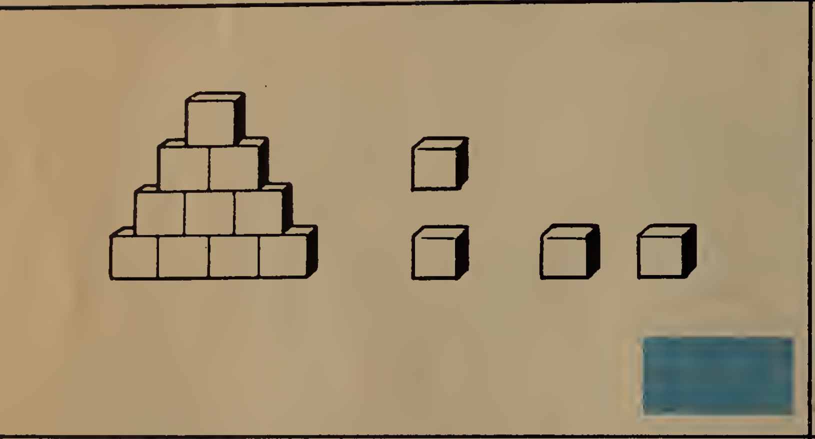


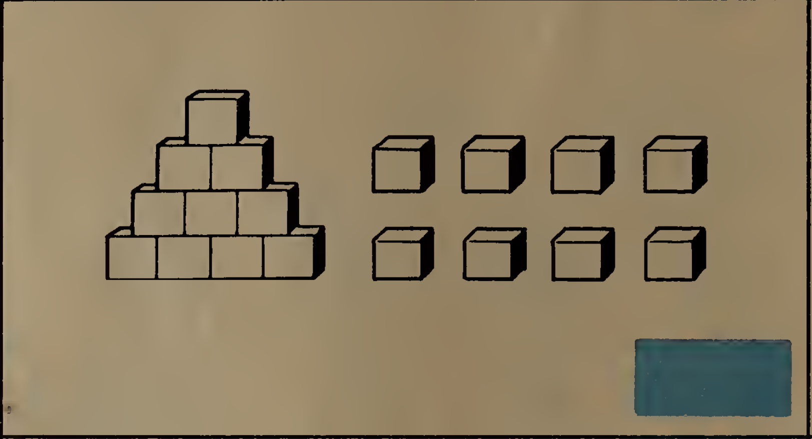

A	10	30	40	20	50	80	60	70	90
B	10	20	60	40	90	50	30	70	90
C	20	40	50	70	30	90	10	80	
D	20	30	80	50	40	70	10	90	
E	10	20	40	60	70	30	70	80	

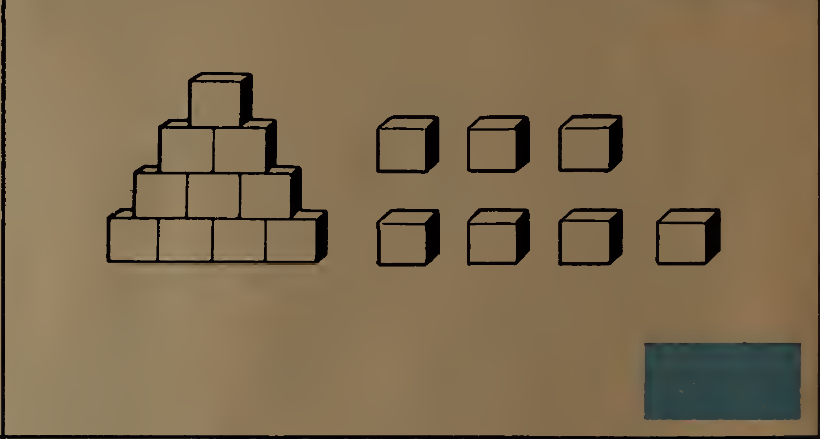
The "Teen" Numbers (Page 19 **Numbers in Action**). Adapt the directions for Page 31 to this page. The pictures here are to show the numbers from 11 to 19 in ascending order. Have the children cross off blocks where necessary, leaving just enough blocks in each picture to show the correct number in the number sequence. They are to write the number that belongs with each picture in its blue answer space. Be sure they accept each pyramid as containing ten blocks, without counting. The numbers in Rows A to E below are to be arranged in ascending order. Direct the children to do this by writing numbers or crossing off numbers when necessary, as they did on page 31.

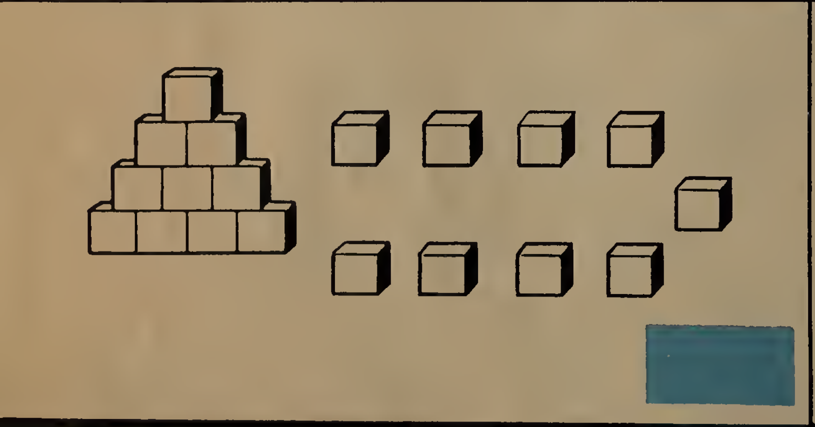


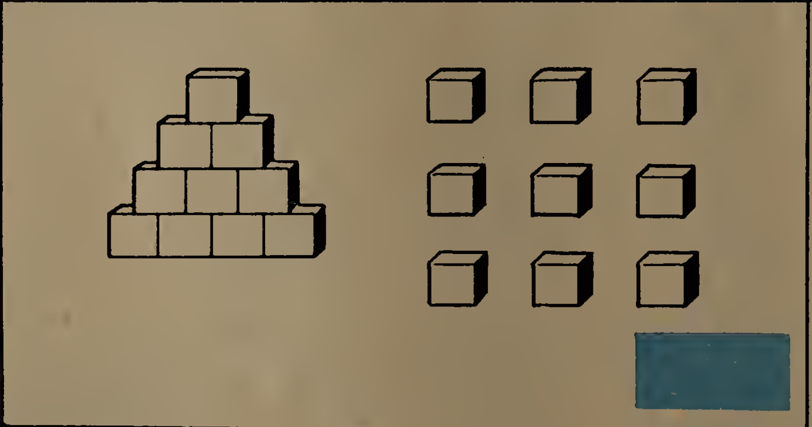


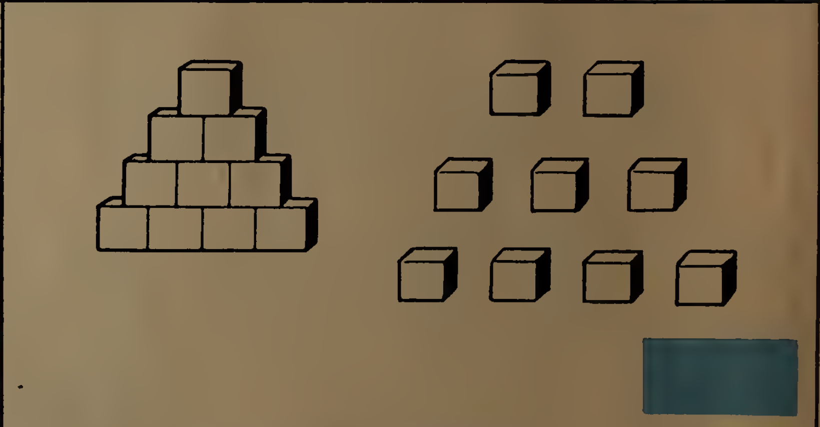






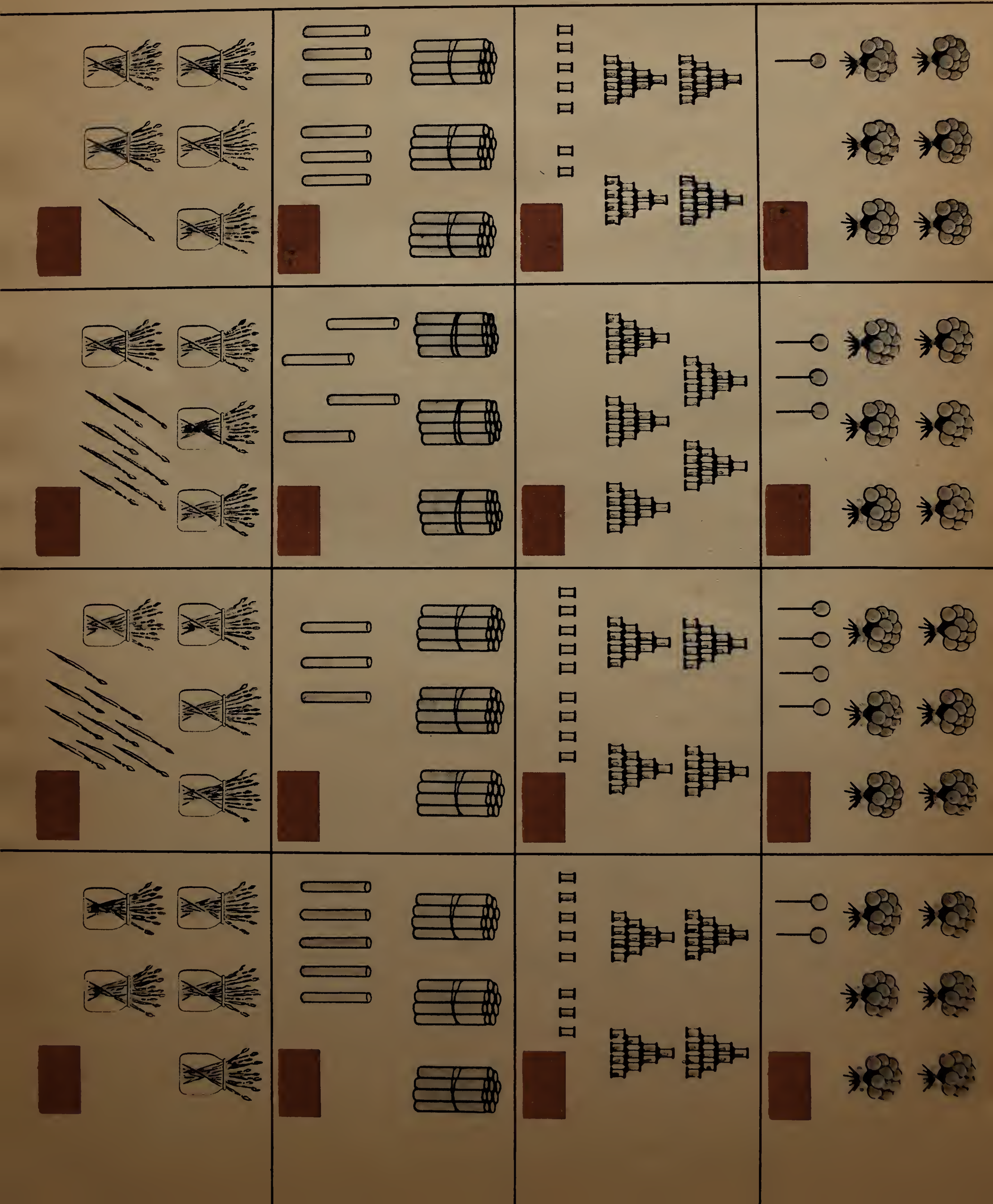






A	10	12	13	18	14	19	16	17	11	19
B	10	11	18	16	14	15	12	13	18	
C	11	15	13	17	15	16	10	18	12	
D	17	11	19	13	18	15	16	12	19	
E	10	14	12	13	19	17	16	11	18	

Symbolism in the Higher Decades (Page 40 **Numbers in Action**). Say: "Look at the first picture of lollipops. There are ten lollipops in each bundle. How many lollipops are not in bundles of ten? How many lollipops are there in all in the picture? Write this number in the brown answer block. For each of the other pictures of lollipops, decide how many there are in all and write this number in the answer block." When the children have done this, point to the four brown lines at the left and say: "On these lines you are to write the numbers that show how many lollipops are in each picture. Write the smallest number on the first line, (Directions continued on page 129)



Symbolism in the Higher Decades (Page 40 Numbers in Action).

Say: "Look at the row of numbers with the brown letter A. The numbers in this row should be in order, from 24, the first number, to 33, the last number. What number should follow 25? The number 21 is wrong, so cross it off and write 26 beside it. Is the next number correct? What number should follow 27? Write the correct number between 27 and the number that follows it in Row A. For the rest of Row A write in and cross off numbers as you need to. When you have finished, the numbers in the row should be in order." Have the children follow the same procedure for each of the

(Directions continued on page 127)

A	24	25	21	27	29	30	31	34	33
B	77	80	82	89	84	88	86	81	87
C	15	16	18	17	20	21	25	24	
D	60	67	62	64	69	66	68	67	69
E	31	32	34	39	38	37	39	41	
F	87	88	90	92	99	94	98	97	99
G	52	57	54	56	58	59	63	61	
H	19	21	22	26	24	25	29	27	
I	43	44	46	49	47	49	50	52	54
J	66	65	67	70	68	69	74	71	73
K	69	71	74	72	73	75	79	77	79	80
L	42	44	49	45	47	48	53	50	

Increasing Groups by 1 and by 10 (Page 41 Numbers in Action). Direct attention to the first picture (the sticks). Say: "How many bundles of ten sticks each are in this picture? How many sticks are not in bundles of ten? Look at the three brown lines. On the top line [point to it] write the number that tells how many sticks there are in all. Now decide how many sticks there would be if you put **one more** stick with the sticks in the picture. Write this number on the next line. Imagine that this one stick has been taken back. Now decide how many sticks there would be if you put a **bundle of ten sticks** with the sticks in the picture. (Directions continued on page 129)

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______
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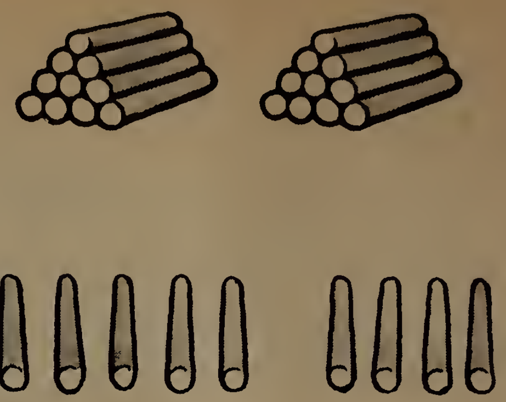

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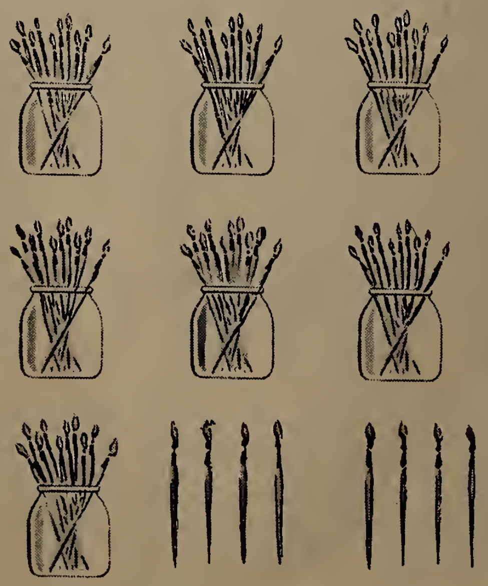


______
______
______

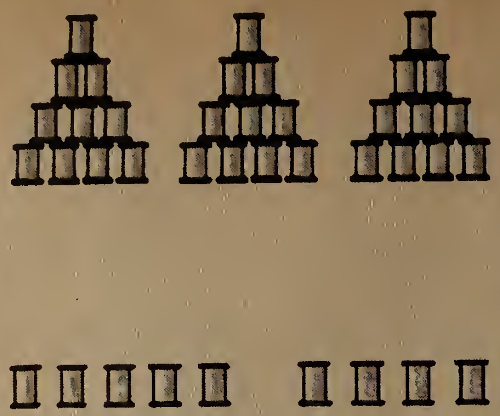
______
______
______

A 73 ______ ______
B 16 ______ ______
C 40 ______ ______
D 89 ______ ______
E 27 ______ ______
F 51 ______ ______
G 87 ______ ______
H 44 ______ ______
I 32 ______ ______
J 53 ______ ______
K 28 ______ ______
L 66 ______ ______
M 82 ______ ______
N 39 ______ ______
O 75 ______ ______
P 19 ______ ______
Q 50 ______ ______

______

______

______



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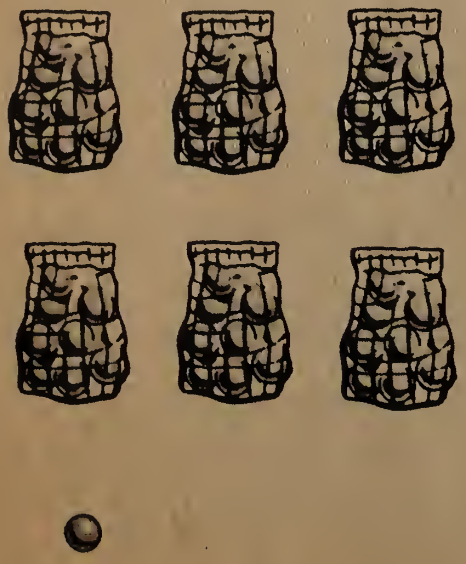

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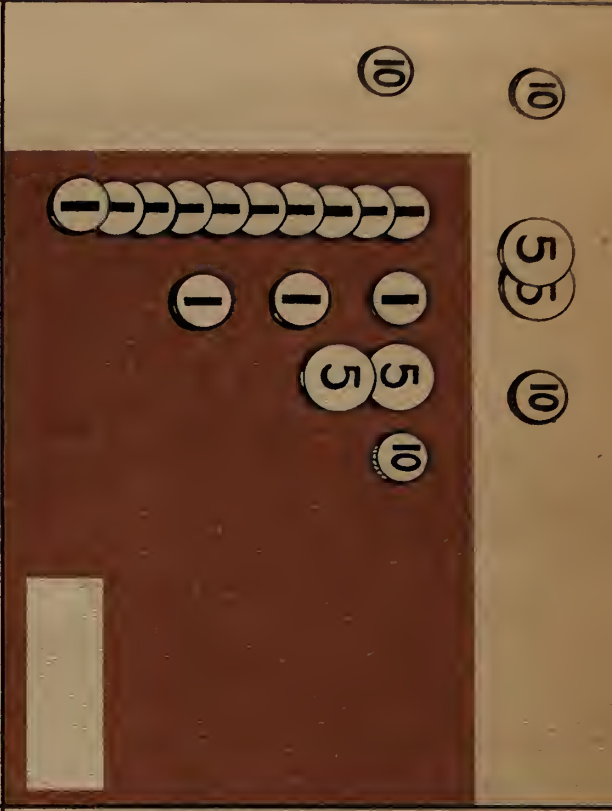
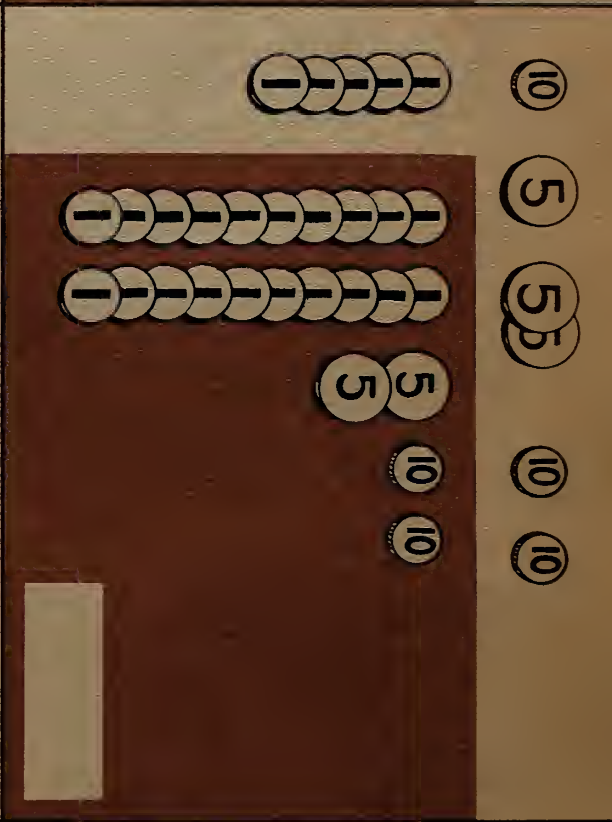
______

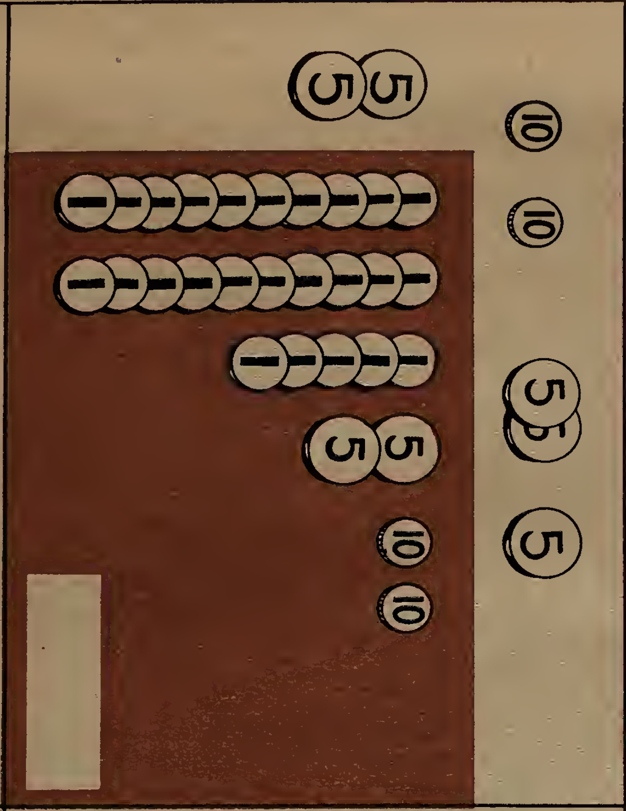
A	54	______	______
B	92	______	______
C	37	______	______
D	63	______	______
E	20	______	______
F	82	______	______
G	43	______	______
H	76	______	______
I	19	______	______
J	80	______	______
K	21	______	______
L	75	______	______
M	47	______	______
N	68	______	______
O	34	______	______
P	11	______	______
Q	99	______	______

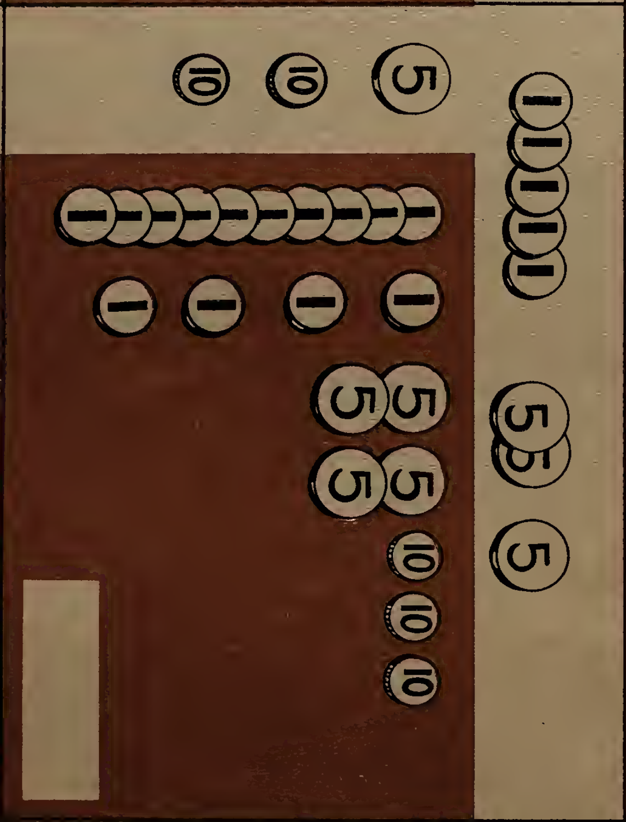
Decreasing Groups by 1 and by 10 (Page 42 Numbers in Action). The directions given for page 35 may be adapted to this page. Here, however, the children are to write, first, the number that shows how many objects are in the picture, next, the number of objects decreased by one; and, finally, the number of objects decreased by ten. Some children may need to go through the pictures three times: first, writing the number of objects in each picture on the first line; next, mentally removing one object from each picture and writing the number; and, finally, mentally removing ten objects from each picture and writing this third number. The practice (Directions continued on page 129)

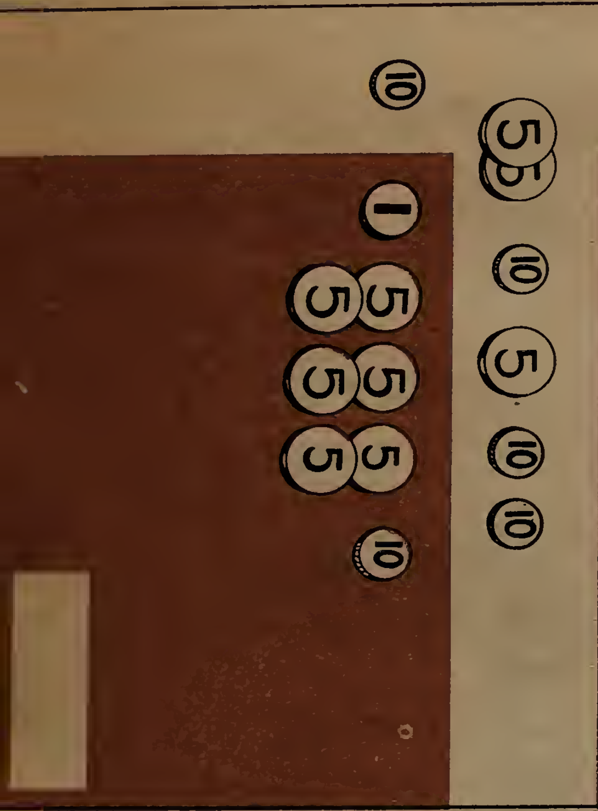
Counting Money by Tens and Ones (Page 43 **Numbers in Action**). Direct attention to the first picture and tell the children that the circles with 10 on them mean dimes, those with 5 on them mean nickels, and those with 1 on them mean pennies. Say: "First count the coins in the brown part of this picture. Count by tens as far as you can and then count by ones. (In this picture the children will probably count the dime, the two nickels, and the ten pennies first and then will finish their counting with the three single pennies.) In the white answer strip write the number that tells how much money you counted. Be sure to write the (Directions continued on page 129)

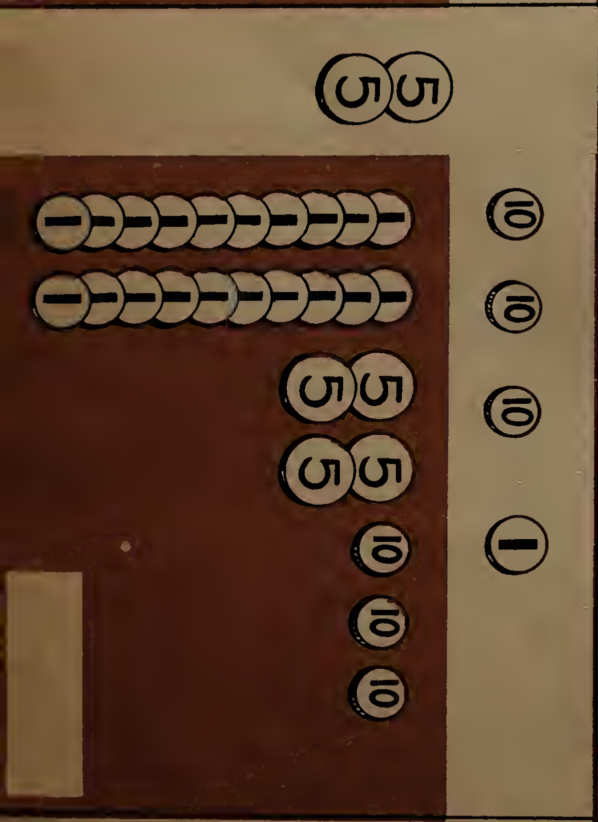


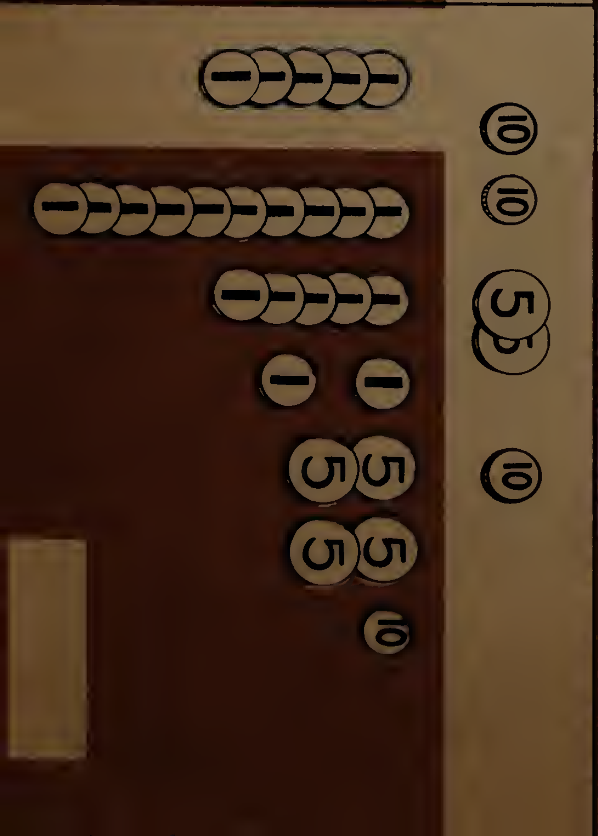






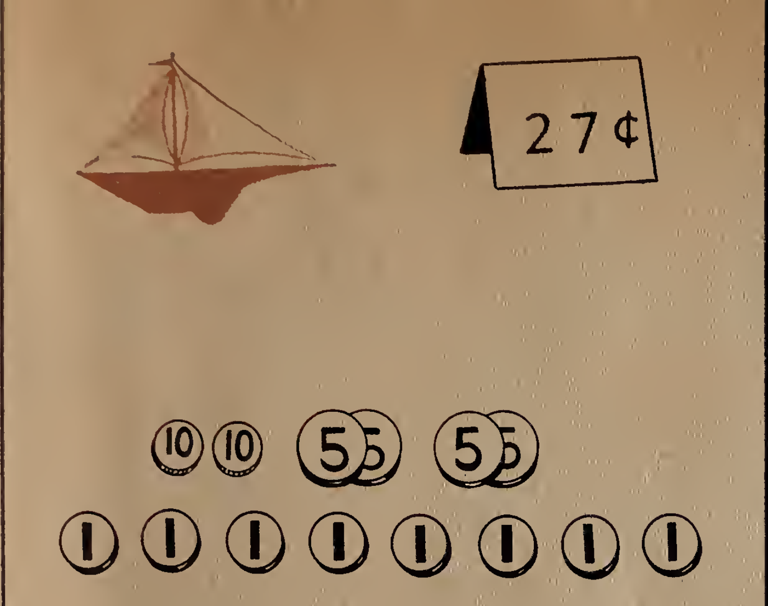


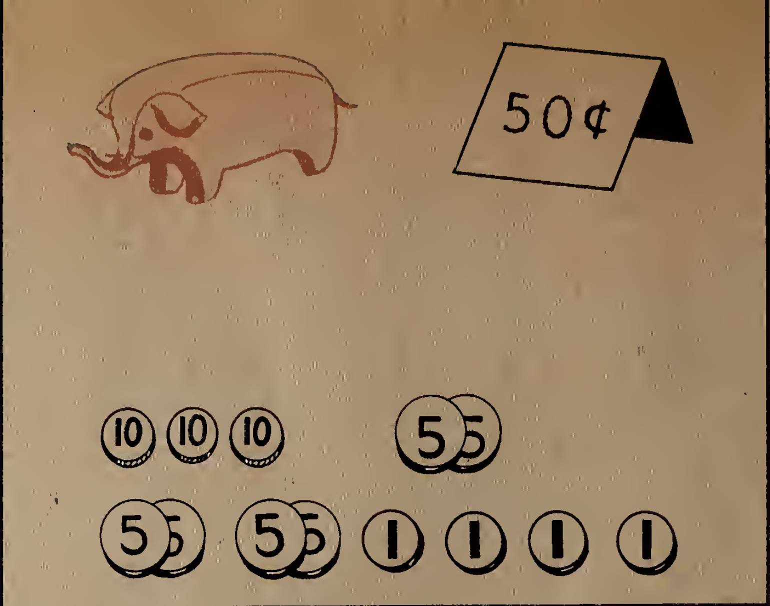


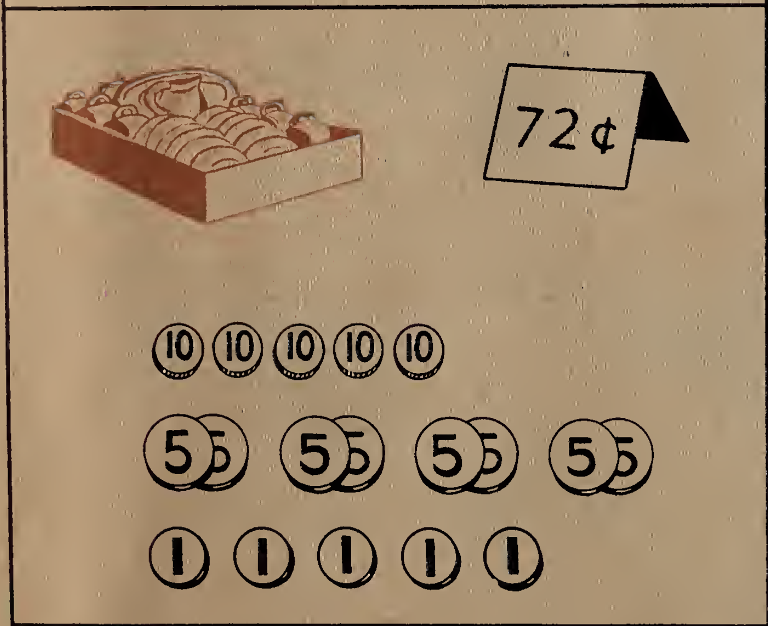


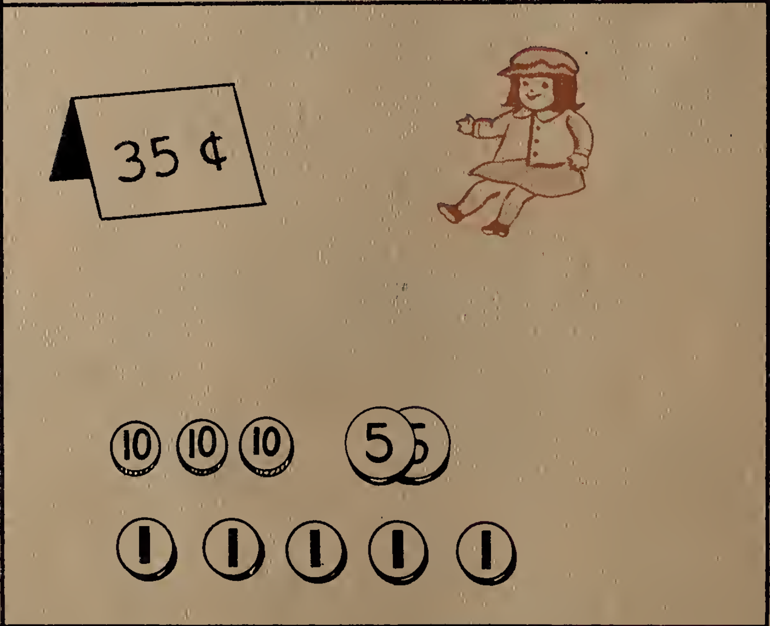
Counting Money by Tens and Ones (Page 44 Numbers in Action). Make sure the children can recognize and differentiate between the dimes, nickels and pennies on this page. Direct attention to the first picture and say "Count the coins in this picture. Count the dimes and groups of nickels and then count the pennies by ones. When you have found out how much money there is in all, write the amount in the brown answer strip. Be sure to write the cents sign. Do the same for each of the other pictures on this page."

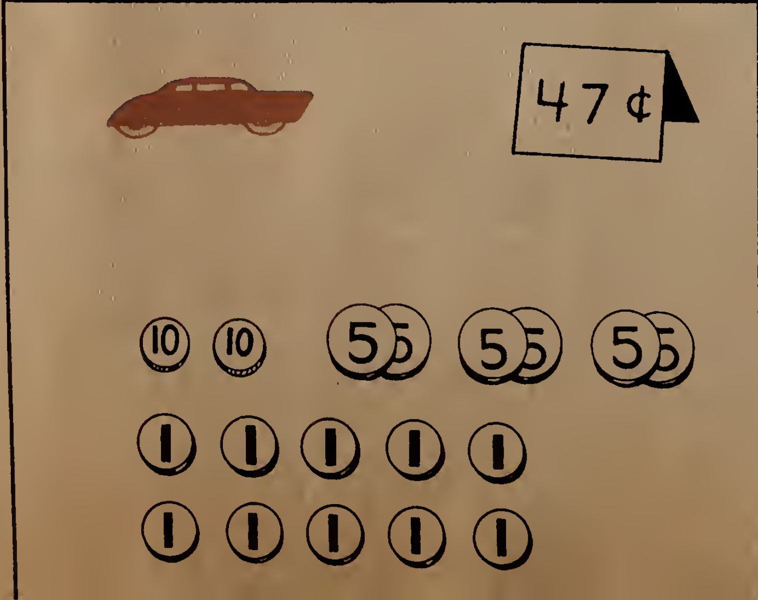
Problems and Practice with Money (Page 45 Numbers in Action). Let the children discover how much each toy costs and decide which toys they would like to buy. Then say: "Pretend that you have these coins (point to the first picture). You are going to use some of them to buy the boat. Draw a circle around just enough money to buy it. Remember that there may be several different coins that you could use. For each of the other pictures draw a circle around just enough money to buy the toy." When the children have completed this work, they may do the problems (letters A to Q) at the right. They are to read each problem and write the answer on the answer line.

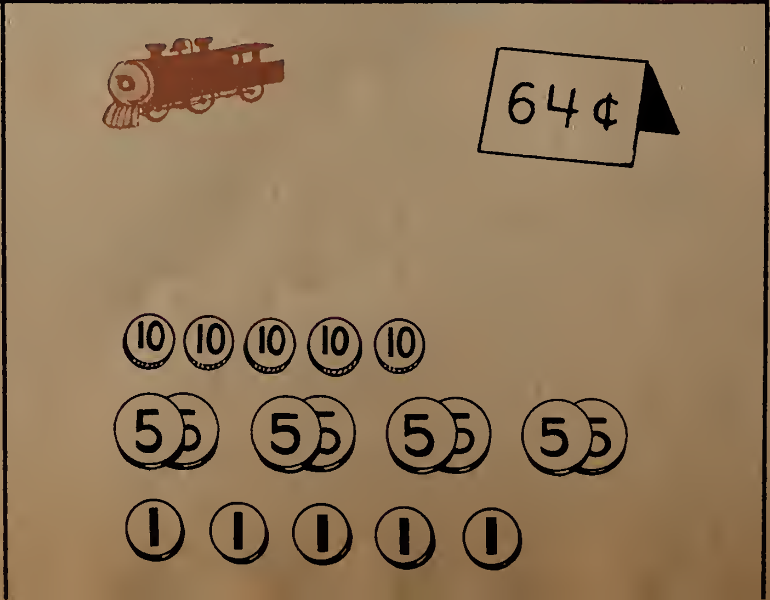












A Add 3¢ and 4¢. ____ ¢

B 6¢ plus 1¢ are ____ ¢.

C 5¢ − 1¢ are ____ ¢.

D 7¢ minus 3¢ are ____ ¢.

E 3 minus 2 is ____.

F 4 + 1 is ____.

G 5¢ + 2¢ are ____ ¢.

H Subtract 6 from 7. ____

I Subtract 2¢ from 7¢. ____ ¢

J Add 3¢ and 2¢. ____ ¢

K 7¢ minus 5¢ are ____ ¢.

L 1 + 2 is ____.

M Add 1 and 6. ____

N 3¢ + 2¢ are ____ ¢.

O 7¢ − 4¢ are ____ ¢.

P 1¢ plus 6¢ is ____ ¢.

Q Subtract 3 from 5. ____

The 6 Group: Combining Two Groups (Page 47 **Numbers in Action**) Say: "How many boys are skating in the first brown picture? How many boys are coming to skate? How many boys will be skating in all? Now look at each of the four white pictures beside the brown one. If a picture shows just six boys skating, put this mark, X, in the brown answer square. If a picture does not show just six boys skating, put this mark, ≋ (scribble), in the square." The children should mark each of the other white pictures on the page with either X or ≋, to indicate whether or not it shows the correct number of children or objects resulting from the action in the accompanying brown key picture.

[illegible] Numbers in Action). Say: "Read the first problem [point to it]. Now look at the pictures. Which picture shows what the first problem tells about? Write the letter of the picture in the brown answer square at the left of the problem [point to it]. What is the answer to the [illegible] for each of the [illegible] tells about. Write the letter of the picture in the answer [illegible]. Then write the answer to the problem on the answer line." If necessary, repeat the directions with the second problem.

1 boy plus 5 boys is ____ boys.

3 plus 3 is ____.

4+2 is ____.

5 boys plus 1 boy are ____ boys.

1 plus 5 is ____.

4 boys plus 2 boys are ____ boys.

2+4 is ____.

1+5 is ____.

5 plus 1 is ____.

2 boys plus 4 boys are ____ boys.

3+3 is ____.

2 plus 4 is ____.

3 boys plus 3 boys are ____ boys.

5+1 is ____.

4 plus 2 is ____.


A


B


C


D


E

The 6 Group: Separating Into Two Groups (Page 50 **Numbers In Action!**) Direct attention to the brown pictures lettered A to E in the top row. Get the children to notice that in each picture a group of toy snowmen is being removed. Then say: "Look at Picture A. How many snowmen are there in all? How many are being taken away? How many will be left? Look at each white picture of snowmen on the page. Whenever you find a picture that shows how many snowmen will be left in Picture A, write the letter **A** in the brown answer square. Now look at Picture B. How many snowmen will be left in this picture? Find each white picture that shows (Directions continued on page 129)

The 6 Group: Symbolism of the Subtraction Basic Facts (Page 51 **Numbers in Action**). The directions given for page 41 may be adapted to the work on this page. Again, each problem at the left requires two responses: the letter of the picture that shows what the problem tells about and also the answer to the problem. Some children will be able to proceed independently after they have done the work connected with the first problem; others will need to have the directions repeated. Before you allow the children to work alone, be sure they understand that each lettered picture shows a group being removed from a collection of objects.

6 – 4 equals ____.

6 sleds minus 1 sled equal ____ sleds.

6 minus 3 equals ____.

6 sleds minus 5 sleds equal ____ sled.

6 sleds minus 4 sleds equal ____ sleds.

6 – 5 equals ____.

6 minus 1 equals ____.

6 – 2 equals ____.

6 – 3 equals ____.

6 minus 2 equals ____.

6 minus 4 equals ____.

6 sleds minus 2 sleds equal ____ sleds.

6 – 1 equals ____.

6 minus 5 equals ____.

6 sleds minus 3 sleds equal ____ sleds.


A


B


C


D

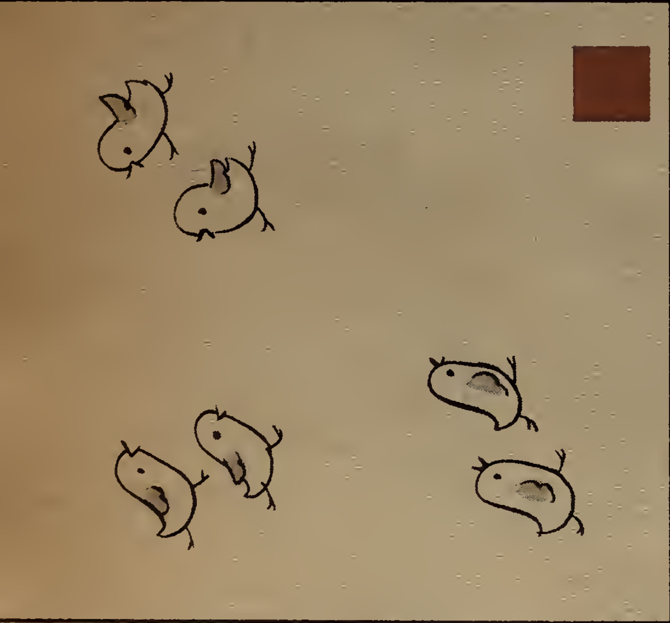

E

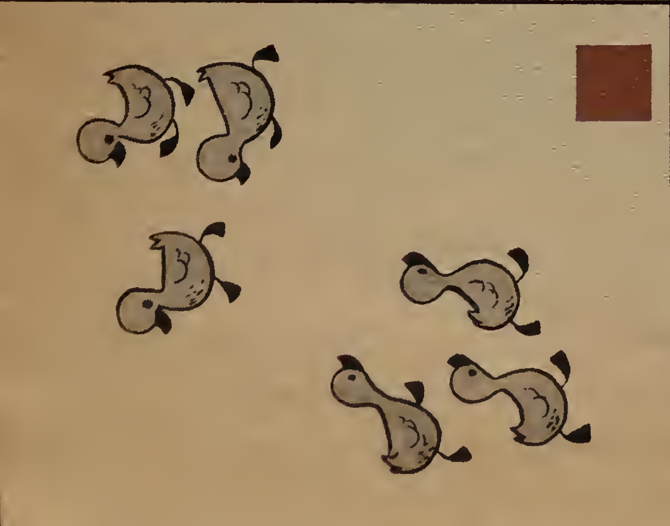
The 6 Group: Combining Equal Groups (Page 52 **Numbers in Action**). Direct attention to the first picture. Say: "How many groups of ducks are there in the picture? How many ducks are there in each group? How many ducks are there in all? Are the groups equal? If the groups are equal, put this mark, X, in the brown answer square in the corner of the picture. If they are not equal, put this mark, ≷ (scribble), in the brown square." Have the children do the same things for all the other pictures on the page.









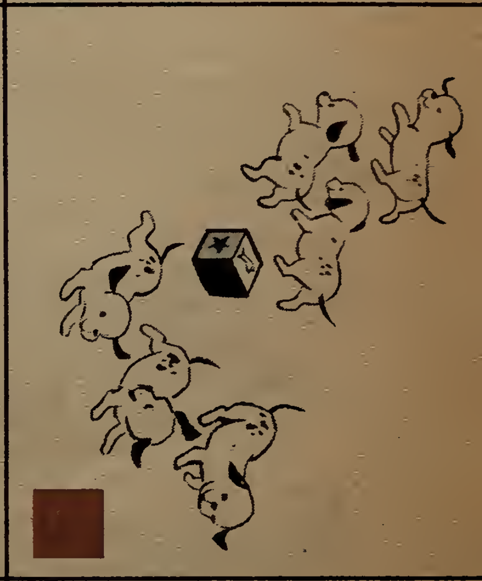



The 6 Group: Separating into Equal Groups (Page 53 **Numbers in Action**). Get the children to notice that in each of these pictures a group of animals is breaking up into smaller groups. Say: "Look at the first picture. If the kittens are going away in equal groups, put this mark, X, in the brown answer square. If the groups are not equal, put this mark, ≷ (scribble), in the answer square. In each of the other pictures put X in the answer square when the groups are equal, and ≷ (scribble) in the answer square when the groups are not equal."

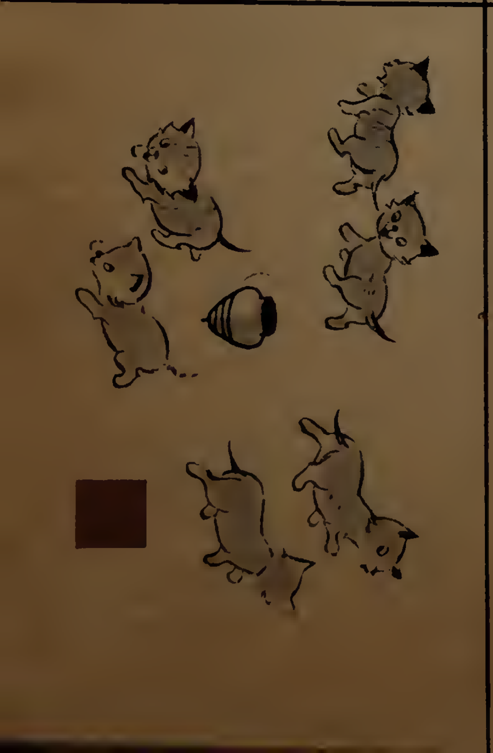


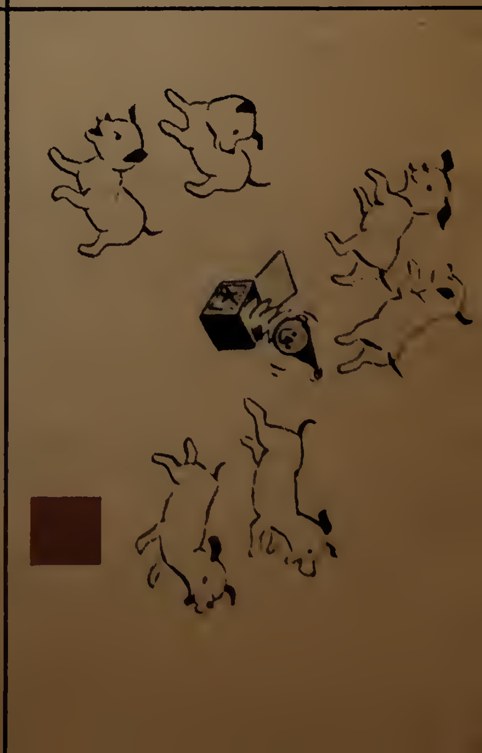






☐ 3 groups of 2 birds equal 6 birds.

☐ 2 groups of 3 ducks equal 6 ducks.

☐ 3 groups of 2 ducks equal 6 ducks.

☐ 2 groups of 3 birds equal 6 birds.

☐ 2 groups of 3 ducks equal____ ducks.

☐ 3 groups of 2 birds equal____ birds.

☐ 2 groups of 3 birds equal____ birds.

☐ 3 groups of 2 ducks equal____ ducks.

☐ 6 ducks equal 3 groups of 2 ducks.

☐ 6 birds equal 2 groups of 3 birds.

☐ 6 birds equal 3 groups of 2 birds.

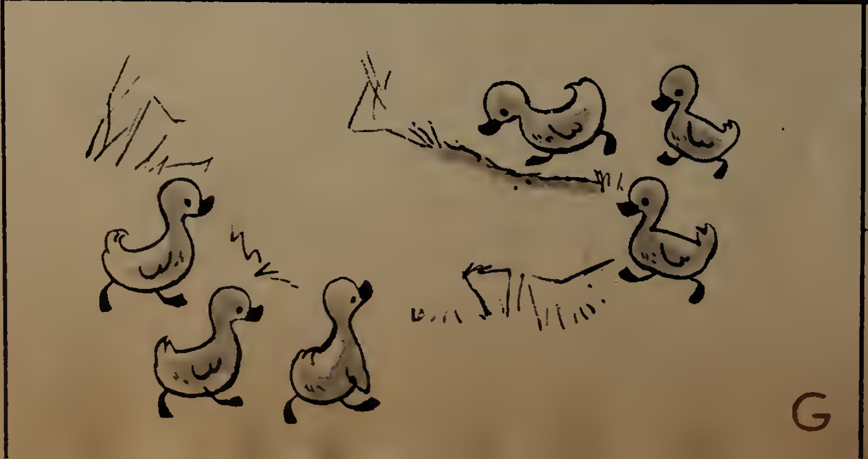
☐ 6 ducks equal 2 groups of 3 ducks.

☐ 6 birds equal____ groups of 2 birds.

☐ 6 ducks equal____ groups of 2 ducks.

☐ 6 ducks equal____ groups of 3 ducks.

☐ 6 birds equal____ groups of 3 birds.



The 6 Group: Combining and Separating Equal Groups (Page 44 Numbers in Action) Say, "The eight problems above the gray line are about equal groups of birds and ducks that are coming together. Read the first problem. Now look at the pictures. Find the picture that belongs with the problem. Write the letter of this picture in the brown answer square in front of the problem." Have the children do the first four problems in this way. Then say: "Now read the next problem [point to it]. Do two things with this problem. First find the picture that belongs with the problem and write its letter in the brown answer square. Then write the (Directions continued on page 129)

Pictorial Problem Situations; Equals Sign (Page 55 **Numbers in Action**). Have the children read the two problems printed in brown in the first picture of pigs. They should decide which problem belongs with the picture, cross off the one that does not belong, and write the answer on the answer line of the correct problem. Let them work independently with the other pictures on the page.

2 threes=____

3 twos=____

6−2=____

4+2=____

3 twos=____

2 threes=____

6=____ twos

6=____ threes

6−4=____

2+4=____

2 threes=____

3 twos=____

6=____ threes

6=____ twos

6−3=____

3+3=____

6−3=____

3+3=____

3 twos=____

2 threes=____

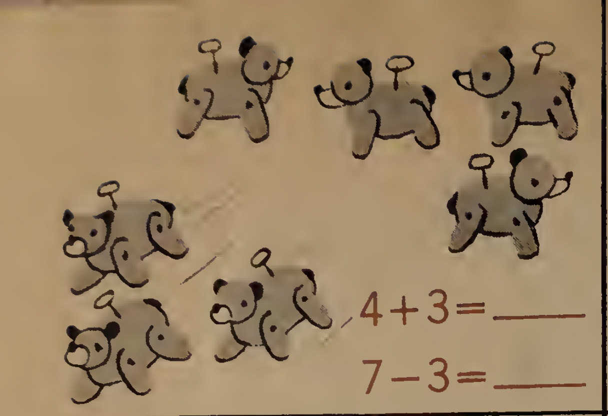
6−2=____

4+2=____

6=____ twos

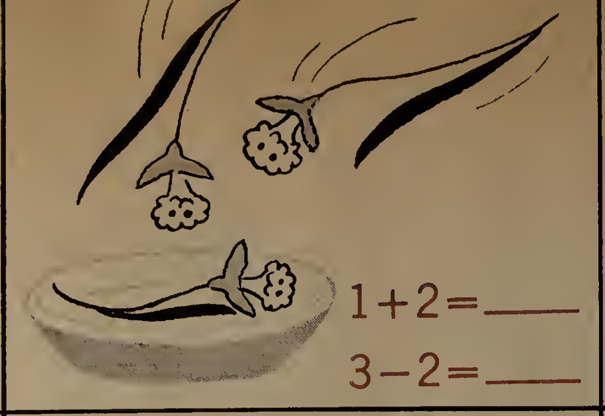
6=____ threes

Pictorial Problem Situations (Page 56 Numbers in Action). Direct the children's attention to the first picture (the toy bears). Then say: "What is happening in this picture? Now read the two problems printed in brown in the picture. One problem belongs with the picture; the other does not. Cross out the problem that does not belong. For the correct problem write the answer on the answer line. Now look at each of the other pictures on the page and do these three things: decide what is happening in the picture, cross out the problem that does not belong with the picture, and write the answer to the correct problem on the answer line."



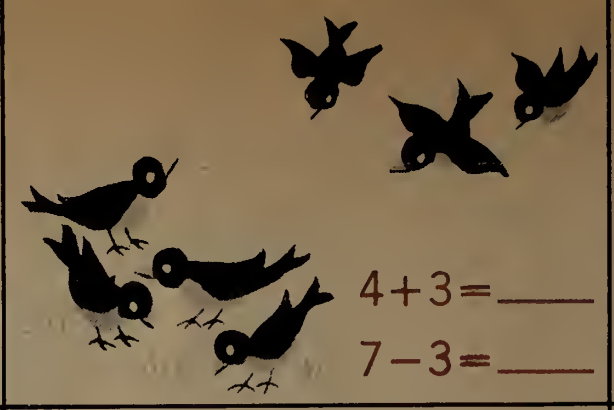
4+3=____

7-3=____



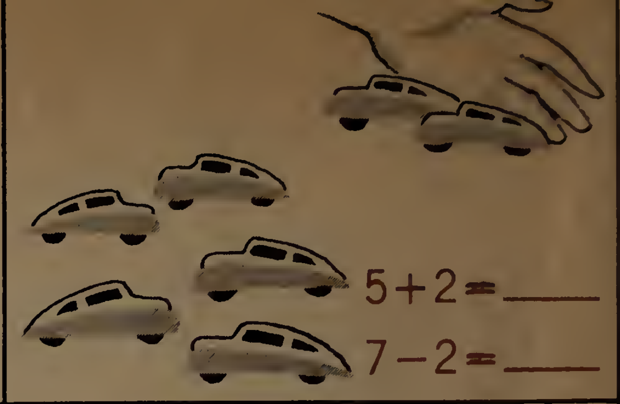
1+2=____

3-2=____



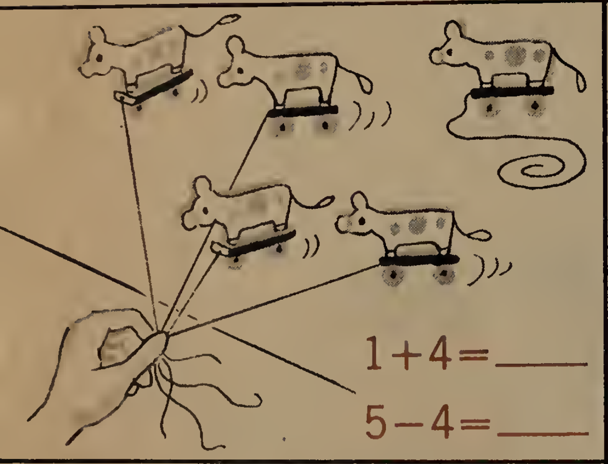
4+3=____

7-3=____



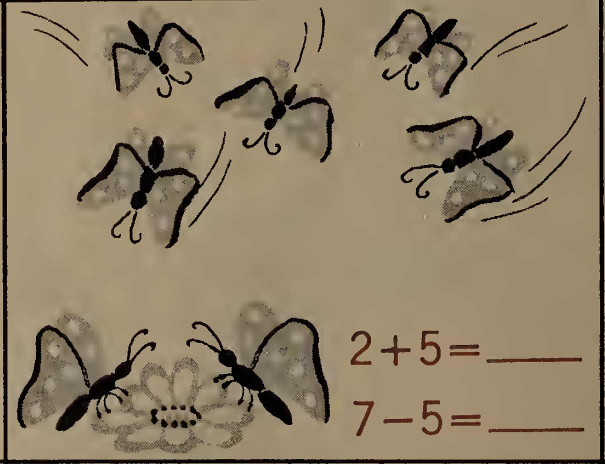
5+2=____

7-2=____



1+4=____

5-4=____

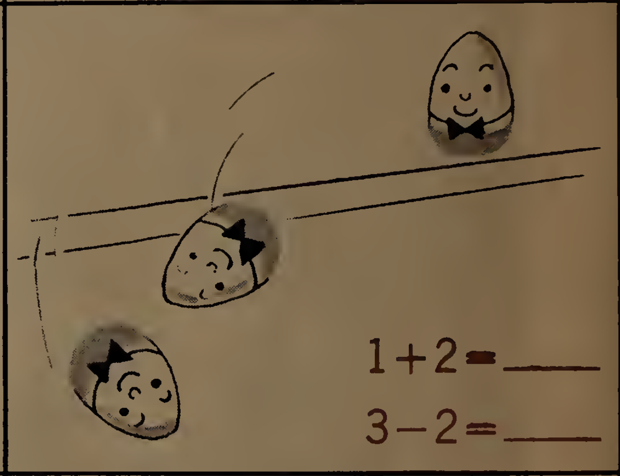


2+5=____

7-5=____

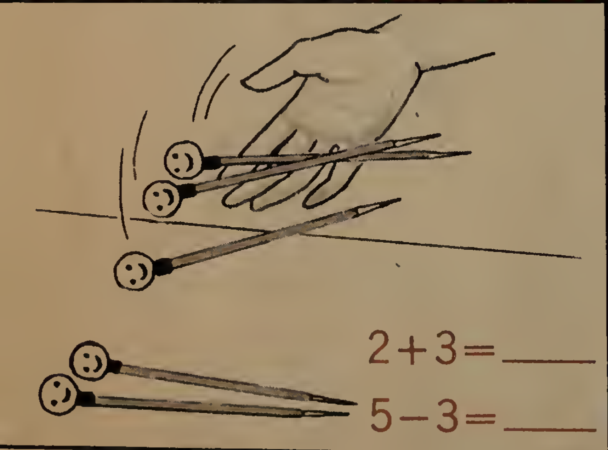
1+6=____

7-6=____



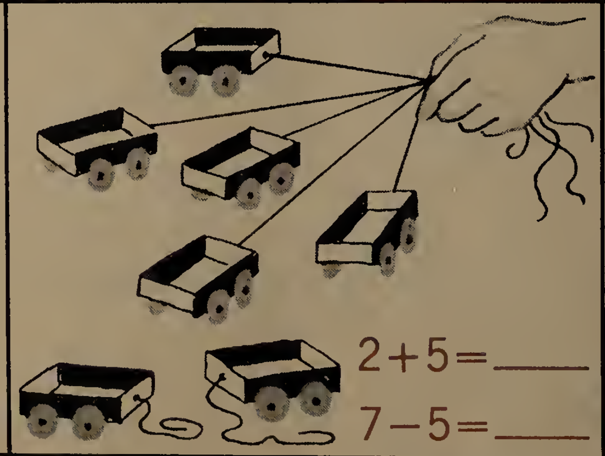
1+2=____

3-2=____



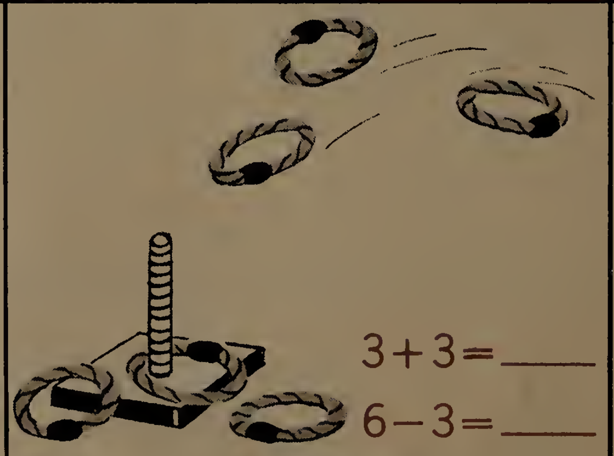
2+3=____

5-3=____



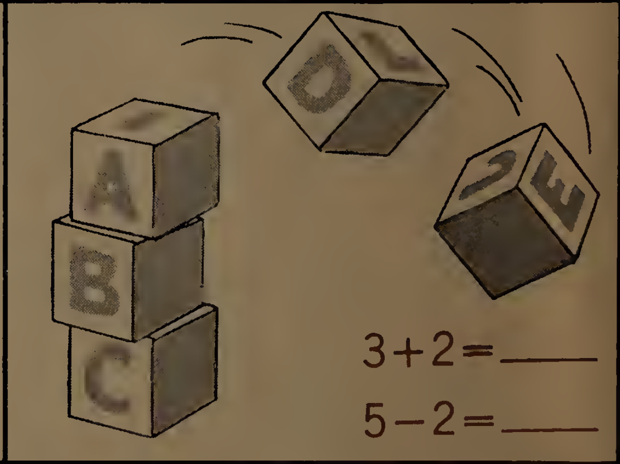
2+5=____

7-5=____



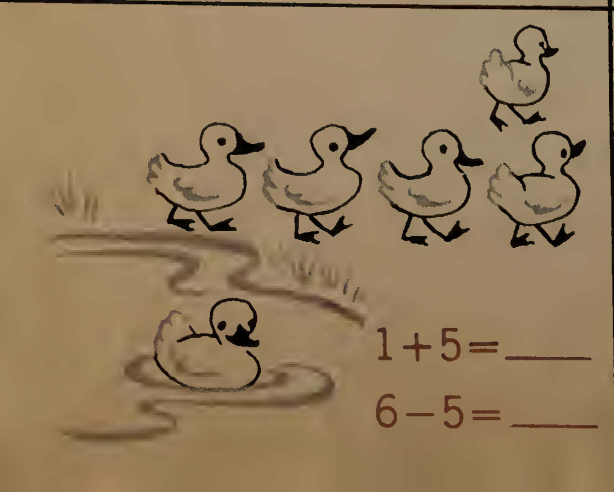
3+3=____

6-3=____



3+2=____

5-2=____

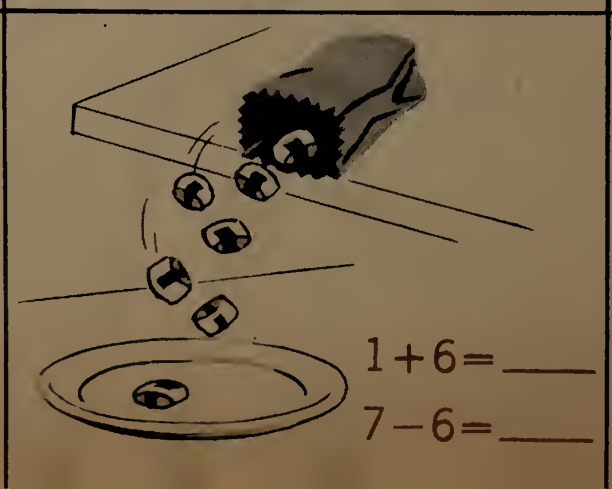


1+5=____

6-5=____

2+4=____

6-4=____



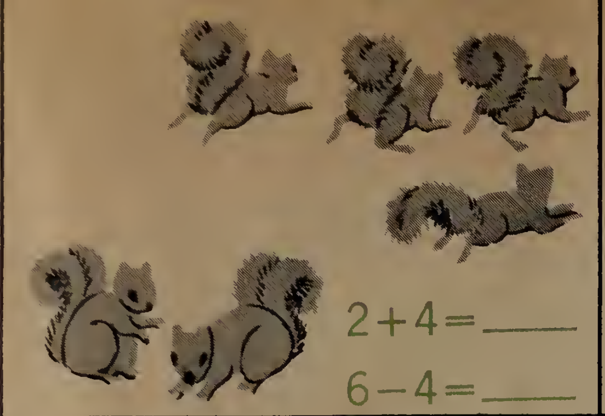
1+6=____

7-6=____

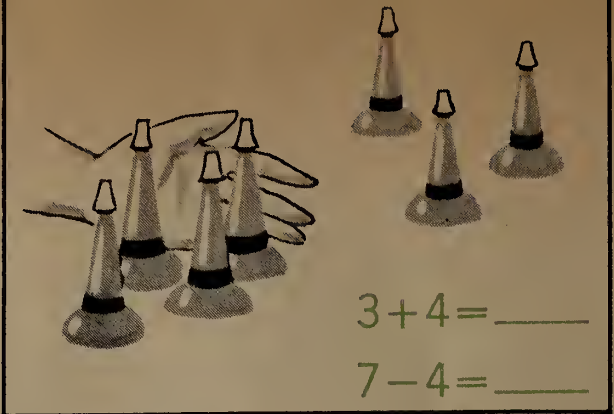
2+3=____

5-3=____

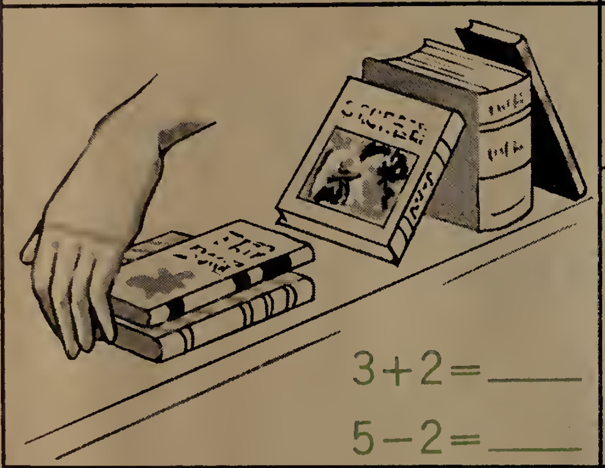
Pictorial Problem Situations and Practice (Page 57 **Numbers in Action**). Adapt the directions for page 48 to these pictures and their accompanying problems. That is, have the children cross off the problem that does not belong with the picture and then supply the correct answer for the other problem. In the problems with the green, gray, and black letters A to Q, the children are to write the answer to each problem on its answer line. Be sure they understand that there are no pictures to accompany these problems.



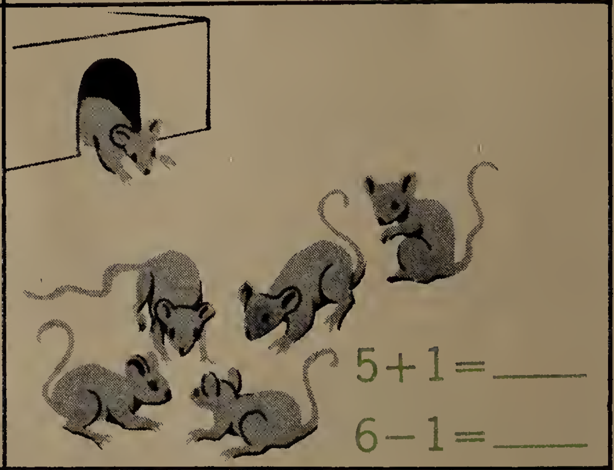
2+4=____
6−4=____



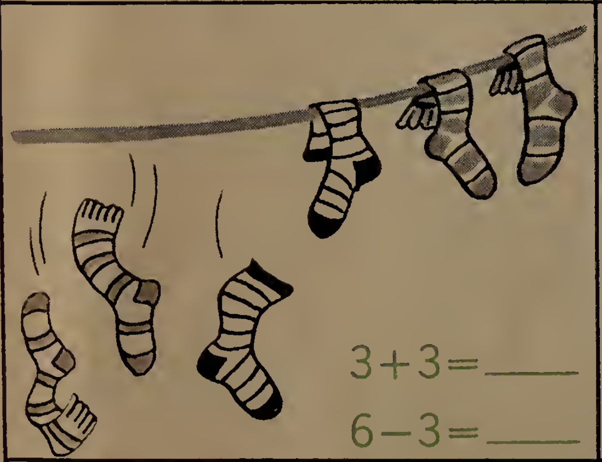
3+4=____
7−4=____



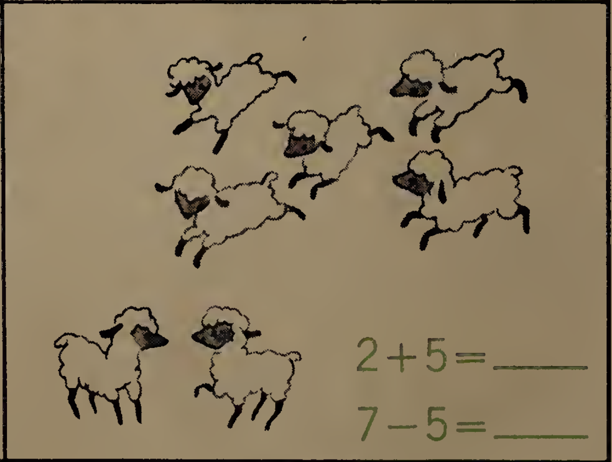
3+2=____
5−2=____



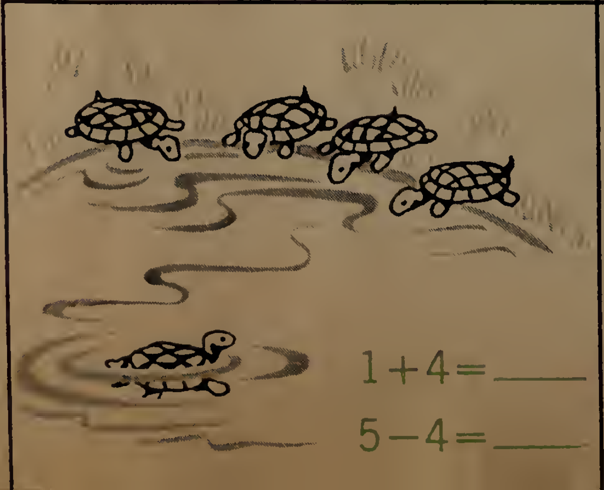
5+1=____
6−1=____



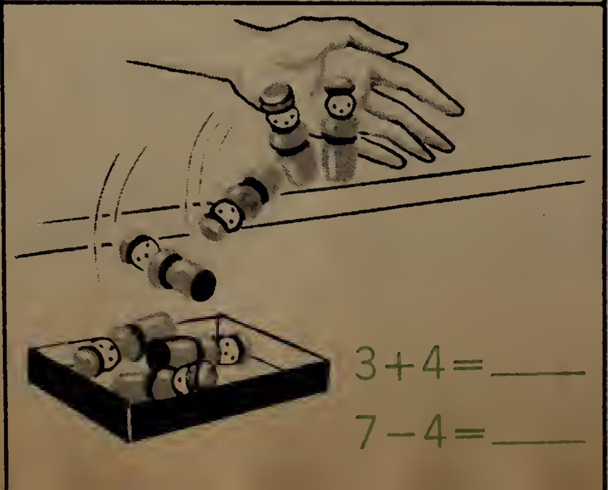
3+3=____
6−3=____



2+5=____
7−5=____



1+4=____
5−4=____

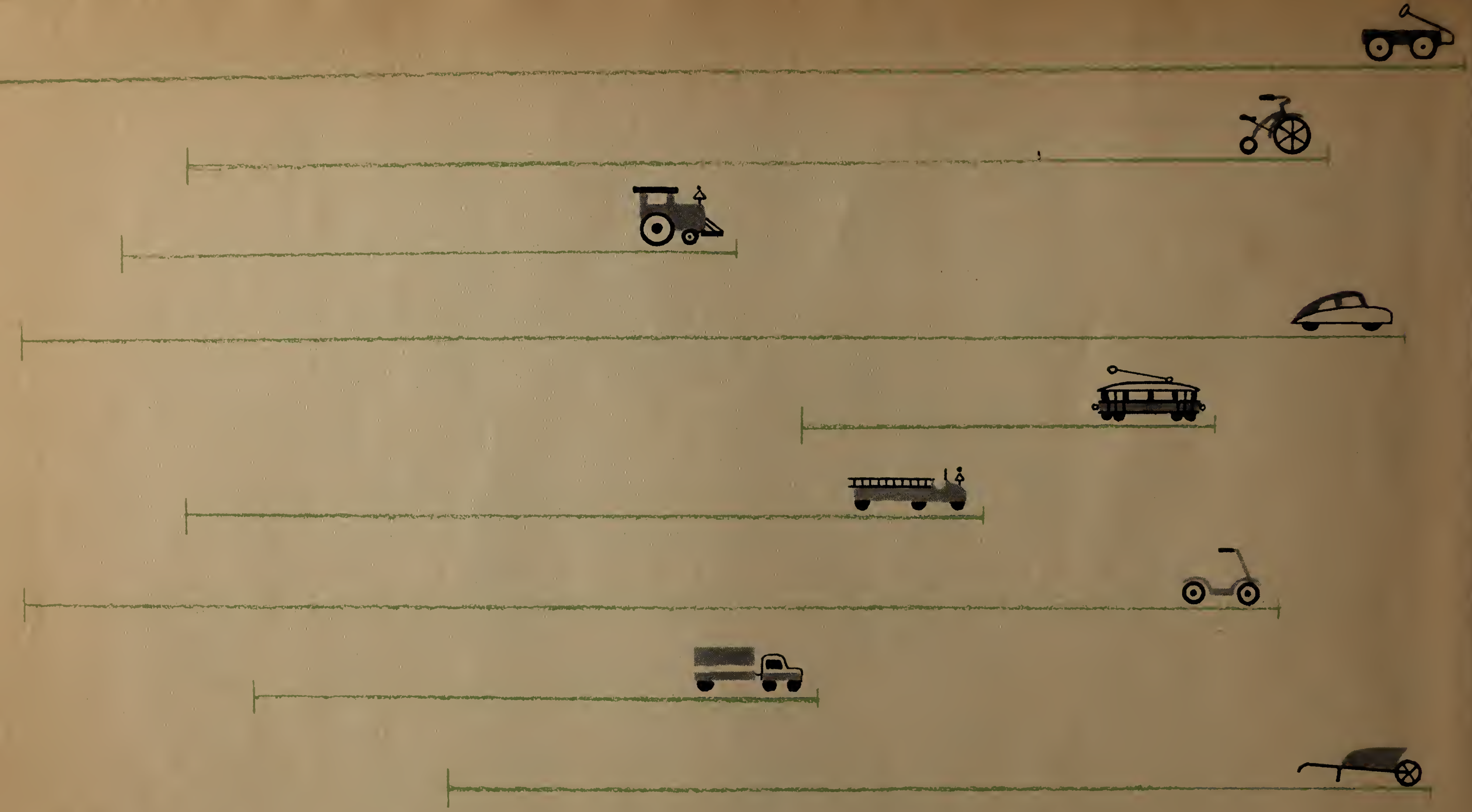


3+4=____
7−4=____

A 3 twos=____
B 5+2=____
C 6+1=____
D 2+4=____
E 7−1=____
F 3+3=____
G 1+1=____
H 4+3=____
I 3−1=____
J 6=____ threes
K 5−2=____
L 4+1=____
M 6−5=____
N 1+2=____
O 4+2=____
P 5−1=____
Q 1+4=____

A 5−4=____
B 2+3=____
C 5−3=____
D 2+1=____
E 2+5=____
F 6−2=____
G 2 threes=____
H 7−6=____
I 1+5=____
J 3−2=____
K 6−1=____
L 7−5=____
M 6=____ twos
N 2−1=____
O 7−3=____
P 1+6=____
Q 6−3=____

A 3+4=____
B 6−4=____
C 7−1=____
D 6−5=____
E 5+1=____
F 2−1=____
G 3+2=____
H 7−2=____
I 5−1=____
J 1+1=____
K 7−4=____
L 6−1=____
M 1+5=____
N 4+2=____
O 3+3=____
P 6−2=____
Q 1+6=____



 ___ more less

 ___ more less

 ___ more less

 ___ more less

 ___ more less

 ___ more less

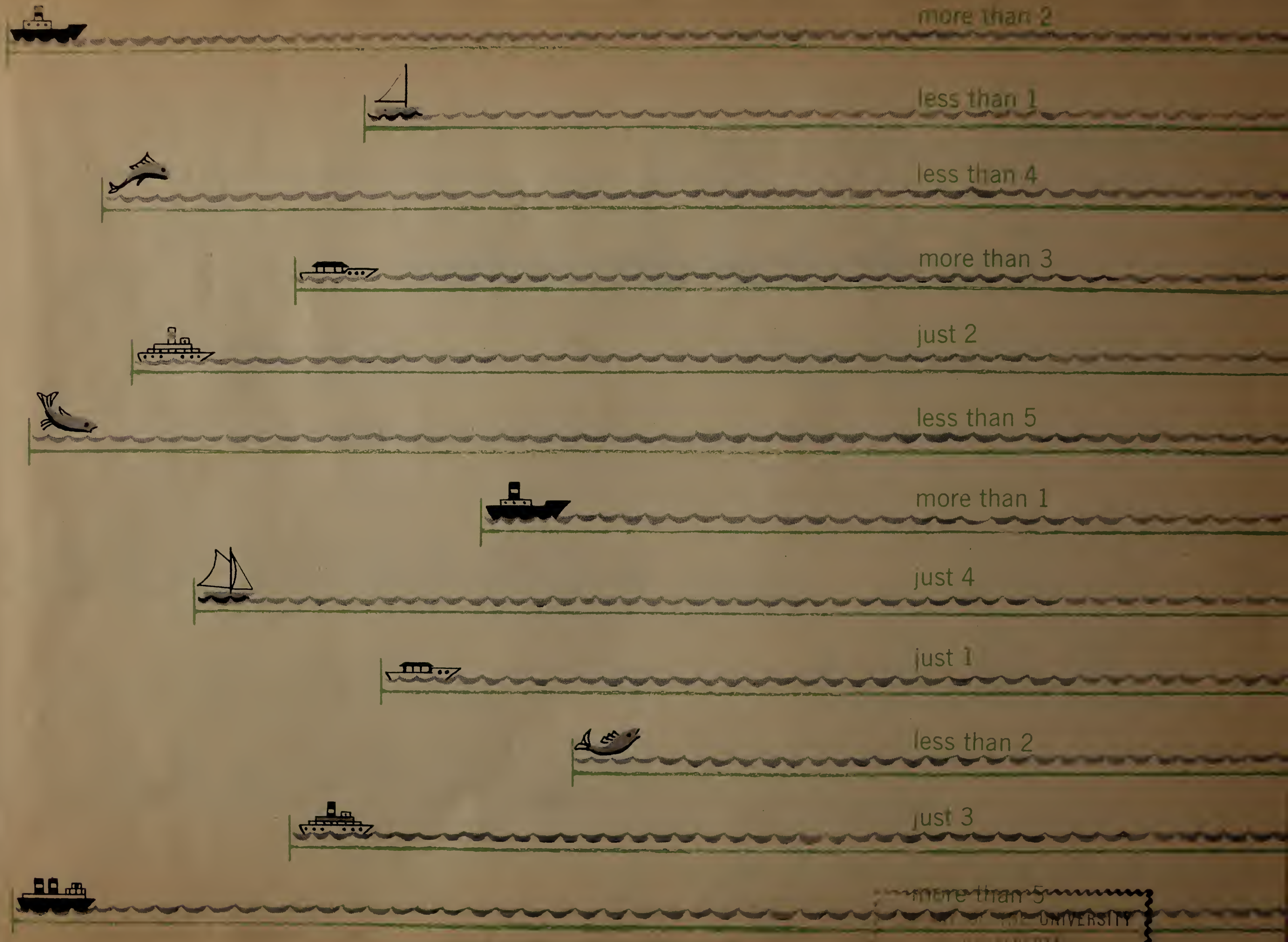
 ___ more less

 ___ more less

 ___ more less

The Unit in Measurement (Page 58 **Numbers in Action**). Give each child one 2-inch stick. Tell the children that the first green line on this page shows how far the wagon has traveled. They are to use the sticks to find out how far the wagon has gone. Say: "Put your stick down on this green line so that one end touches the little mark at the left [point to it]. Make a mark at the other end of the stick. Then pick up the stick and put it down again so that one end touches the mark you made. Do this as many times as you can along the green line. Be sure to measure to the little green line at the right [point to it]." When the children have done this, say: "The distance (Directions continued on page 129)

The Unit in Measurement (Page 58 **Numbers in Action**). Give each child a 2-inch stick. Then get the children to notice the boat on the first green line and to read to themselves what is printed in green at the right [more than 2]. Say: "What you have just read tells you that the boat will travel a distance a little more than two sticks long. You are to find where the boat will stop on the green line. Put your stick down on the green line so that one end just touches the little mark beside the boat. Make a mark at the other end of the stick. Pick up the stick and put it down again so that one end just touches the mark you made. Make another mark at the other (Directions continued on page 129)



☐ 

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A 1 inch
B more than 1 inch
C less than 1 inch
D 2 inches
E more than 2 inches
F less than 2 inches
G 3 inches
H more than 3 inches
I less than 3 inches
J 4 inches
K more than 4 inches
L less than 4 inches
M 5 inches
N more than 5 inches
O less than 5 inches

☐ 

☐ 

☐ 

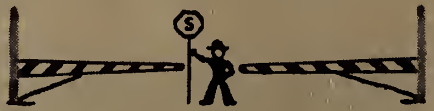
☐ 

Foot and Inch (Page 59 **Numbers in Action**). Give each child one 1-inch stick. Direct attention to the first paper cutout (the dolls). Tell the children that they are to use their sticks to find how long this cutout is. Say: "Put your stick down at the bottom of the cutout and make a mark at the end of the stick. Pick up the stick and put it down again with one end at the mark you made. Make another mark at the other end of the stick. Keep on doing this until you come to the end of the cutout. How many inches long is it? Now look at the printed words at the right [point to them]. Find the words that tell how long the first cutout is and write the (Directions continued on page 129)

Foot and Inch (Page 60 **Numbers in Action**). Give each child a foot ruler or a strip of cardboard marked in inches. Say: "You are to measure each object on this page with your ruler. Look at the toy train at the top of the page. Put your ruler down on the train. Be sure the ruler is in a straight line. Decide how long the train is. Now read the words that are printed in green under the train. Decide which of the three answers you should use and write on the answer line the number that tells how long the train is. Cross out the words you do not need to use. Do the same things for each of the other objects on the page."

just ____ inches more than ____ inches less than ____ inches

just ____ inches more than ____ inches less than ____ inches



just ____ inches more than ____ inches less than ____ inches

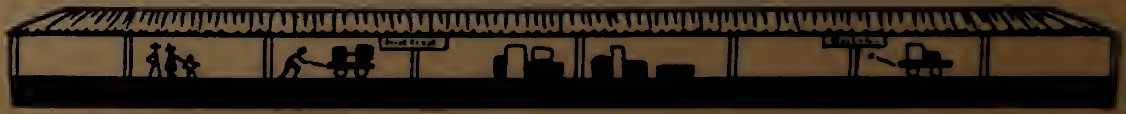
just ____ inches more than ____ inches less than ____ inches

just ____ inches more than ____ inches less than ____ inches

just ____ inch more than ____ inch less than ____ inch

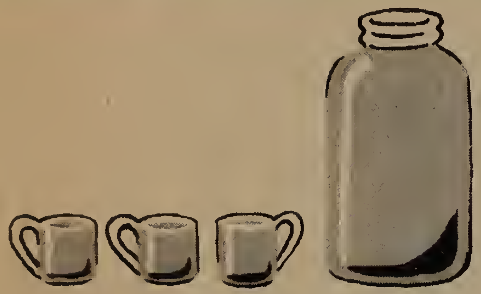
just ____ inches more than ____ inches less than ____ inches

just ____ inches more than ____ inches less than ____ inches



just ____ inches more than ____ inches less than ____ inches

The Standard Unit in Measuring Capacities (Page 61 **Numbers in Action**) Direct attention to the first vertical row of pictures. Say: "Look at the first picture with the green background [point to it], then at the first picture under it. Is there less than, more than, or just as much orange juice in the cups and bottle in this picture as in those in the green picture? If you are sure you know, put this mark, X, in the green square. If you are not sure, put this mark, ≋ (scribble), in the square. Next look at the words below the picture. If you put this mark, X, in the square, decide which of these words belongs with the picture [less]. Draw a circle around the correct word (Directions continued on page 129)



more less equal 🟩

more less equal 🟩

more less equal 🟩

more less equal 🟩

more less equal 🟩

more less equal 🟩

more less equal 🟩

more less equal 🟩

more less equal 🟩

more less equal 🟩

more less equal 🟩

more less equal 🟩

Quart and Pint (Page 62 **Numbers in Action**). Say: "Look at the first picture [point to it]. How many quart jars are full? How many pint jars are empty? Pretend that you are going to fill the empty jars from the full jars. With your pencil color as many empty jars as you can fill from the full ones. Do this for each of the other pictures. If only part of any jar can be filled, color that jar part way." For the practice at the right (Problems A to Q) tell the children to read each problem and then write the correct number on the answer line.

A 3 quarts= ____ pints

B 2 pints= ____ quart

C 2 quarts plus 1 pint= ____ pints

D 6 pints= ____ quarts

E 2 quarts plus 2 pints= ____ quarts

F 2 groups of 3 pints each= ____ pints

G 1 quart plus 2 quarts= ____ pints

H 6 pints minus 1 quart= ____ pints

I 1 pint plus 1 quart= ____ pints

J 6 pints= ____ groups of 2 pints each

K 1 pint plus 1 pint= ____ quart

L 6 quarts minus 4 quarts= ____ quarts

M 5 pints minus 3 pints= ____ pints

N 1 pint plus 5 pints= ____ pints

O 2 quarts plus 3 quarts= ____ quarts

P 3 groups of 2 pints each= ____ pints

Q 2 pints plus 2 pints= ____ quarts

____ rabbits in all

Subtract ____ rabbits.

____ more rabbits than dogs

____ baskets in all

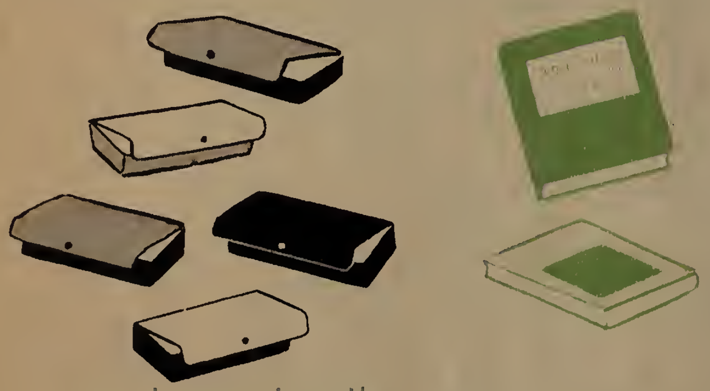
Subtract ____ baskets.

____ more baskets than boxes

____ plants in all

Subtract ____ plant.

____ more plants than boxes



____ boxes in all

Subtract ____ boxes.

____ more boxes than books

____ plants in all

Subtract ____ plants.

____ more plants than baskets

____ rabbits in all

Subtract ____ rabbits.

____ more rabbit than birds

____ ducks in all

Subtract ____ ducks.

____ more duck than rabbits

____ boxes in all

Subtract ____ boxes.

____ more boxes than plants

____ boxes in all

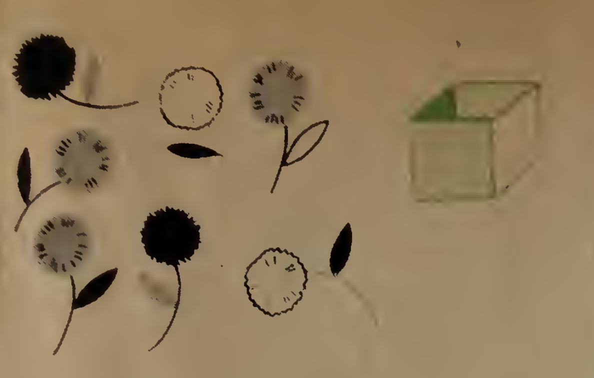
Subtract ____ boxes.

____ more boxes than plants

Comparing Groups by Subtraction (Page 64 **Numbers in Action**) "How many rabbits are there in the first picture? How many dogs are there? Now read the first problem in the picture and write the correct number on the answer line. Read the next problem. You should subtract as many rabbits as there are dogs. Draw a circle around as many rabbits as there are dogs. Make the circled rabbits 'go away' by crossing them out. How many rabbits did you subtract? Write this number on the answer line for the second problem. Now read the last problem and write the correct number on the answer line. Do the same things for each of the other pictures."

Comparing Groups by Subtraction (Page 65 **Numbers in Action**).

Say: "In each picture on this page you are to find how many more objects there are in the larger group than in the smaller group. Look at the first picture. How many flowers are there? How many boxes are there? Read the first problem in the picture. You write the number 1 on the answer line because you subtract as many flowers as there are boxes. Now draw a circle around one flower. Make this flower 'go away' by crossing it off. Read the second problem in the picture and write the correct number on the answer line. Do these same things for each of the other pictures on the page."



Subtract ____ flower.

____ more flowers than boxes

Subtract ____ baskets.

____ more baskets than boxes

Subtract ____ rabbits.

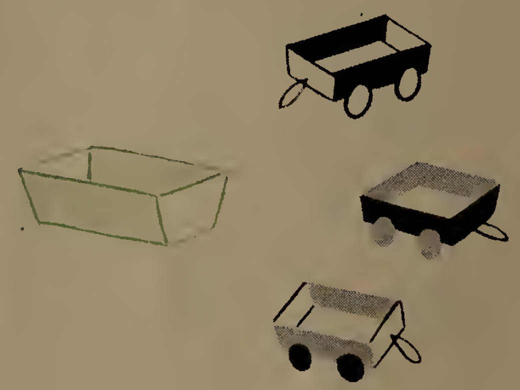
____ more rabbit than baskets

Subtract ____ plant.

____ more plants than flowers

Subtract ____ bears.

____ more bears than rabbits



Subtract ____ wagon.

____ more wagons than boxes

Subtract ____ cars.

____ more cars than baskets

Subtract ____ boxes.

____ more box than plants

Subtract ____ boxes.

____ more boxes than plants

Subtract ____ plants.

____ more plant than baskets

Subtract ____ flowers.

____ more flowers than boxes

Subtract ____ wagons.

____ more wagons than baskets

Subtract ___ cars.

___ more cars than sleds

Subtract ___ wagons.

___ more wagon than sleds

Subtract ___ boats.

___ more boats than cars

Subtract ___ dogs.

___ more dogs than wagons

Subtract ___ sleds.

___ more sled than boats

Subtract ___ baskets.

___ more baskets than boxes

Subtract ___ ball.

___ more balls than sleds

Subtract ___ kittens.

___ more kittens than boxes

Subtract ___ dolls

___ more dolls than wagons

Subtract ___ kittens

___ more kitten than dogs

Subtract ___ books

___ more books than boxes

Subtract ___ boats

___ more boats than balls

Comparing Groups by Subtraction; Symbolism (Page 66 Numbers in Action) The directions given for pages 56 and 57 may be adapted to the work on this page. Say: "Look at the first picture. You are to find how many more cars there are than sleds. Read the first problem. What number should you write on the answer line? Now write the numbers that tell you how to find how many more cars there are than sleds. Write them in the green answer strip. [See that all the children write '6 — 3 = 3.'] Now read the second problem in this picture. Write the correct number on the answer line. Do the same things for each of the other pictures."

How Many More Are Needed (Page 68 **Numbers in Action**). Direct attention to the first picture of balls and say: "Read the first problem in this picture. How many balls will the box hold? Write this number on the answer line. How many balls are there for the box? Write this number on the answer line in the next problem. Are more balls needed to fill the box? Now look at the next picture [point to it]. Does this picture show enough balls to fill the box? You can use this picture to find **how many more** balls are needed. Cross off two of these six balls because you already had two balls for the box. Now you can see how many more balls you need to fill (Directions continued on page 129)

This is a box for ____ balls.

There are ____ balls.

6 balls – ____ balls = ____ ball

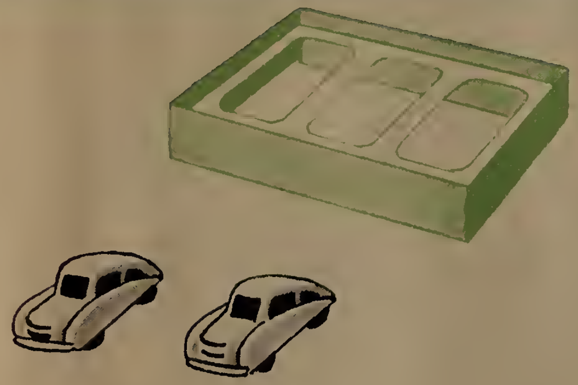
____ more balls are needed.

This is a boat for ____ dolls.

There are ____ dolls.

7 dolls – ____ dolls = ____ dolls

____ more dolls are needed.



This is a box for ____ toy cars.

There are ____ toy cars.

3 cars – ____ cars = ____ car

____ more car is needed.

This is a box for ____ dolls.

There is ____ doll.

5 dolls – ____ doll = ____ dolls

____ more dolls are needed.

This is a box for ____ toy cows.

There are ____ toy cows.

7 cows – ____ cows = ____ cows

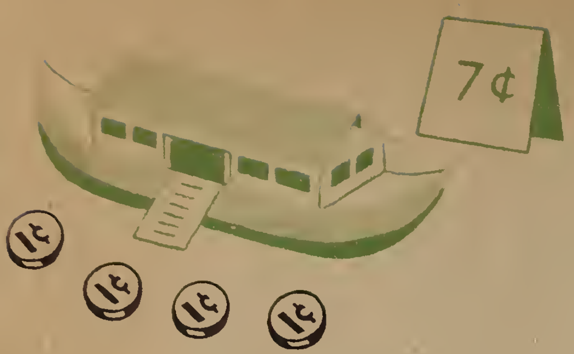
____ more cows are needed.

This is a box for ____ toy dogs.

There are ____ toy dogs.

6 dogs – ____ dogs = ____ dogs

____ more dogs are needed.



___¢ will buy the boat.

There are ___¢.

7¢ – ___¢ = ___¢

___ more pennies needed

___¢ will buy the pigs.

There are ___¢.

5¢ – ___¢ = ___¢

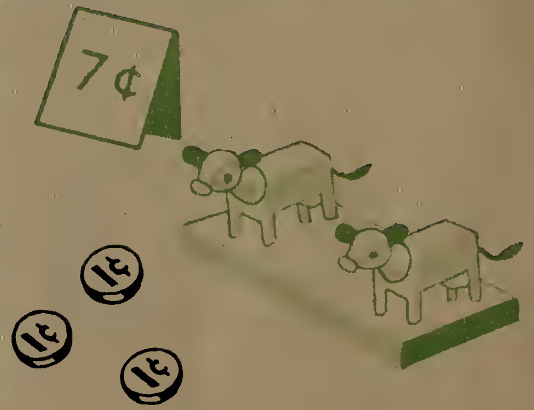
___ more pennies needed

___¢ will buy the bears.

There are ___¢.

6¢ – ___¢ = ___¢

___ more pennies needed

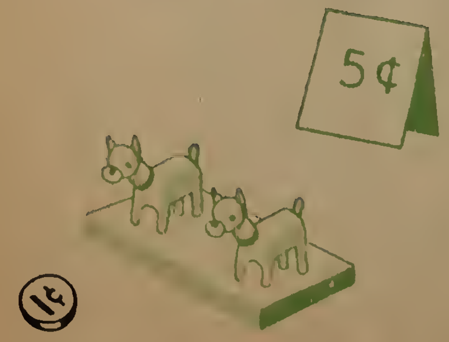


___¢ will buy the cows.

There are ___¢.

7¢ – ___¢ = ___¢

___ more pennies needed



___¢ will buy the dogs.

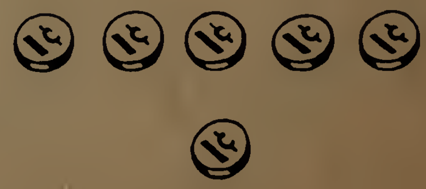
There is ___¢.

5¢ – ___¢ = ___¢

___ more pennies needed

___¢ will buy the rabbits.

There are ___¢.

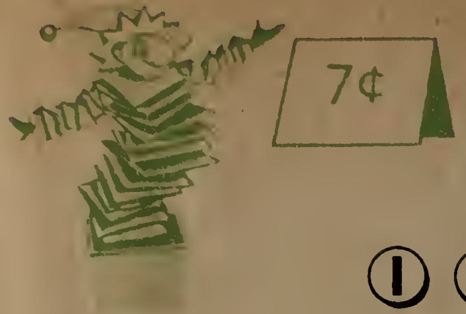


6¢ – ___¢ = ___¢

___ more pennies needed

Symbolism of How Many More Are Needed (Page 69 Numbers in Action) Say, "Read the first problem under the picture of the green boat. How many cents are needed to buy the boat? Write this number on the answer line. Pretend that you have the pennies shown in this picture. On the answer line in the next problem write the number that tells how much money you have. Do you need more pennies to buy the boat? You will use the next picture [point to it] to find out how many more pennies you need. Does this second picture show enough pennies to buy the boat? How many do you really have? Cross off four of the seven pennies because you already have (Directions continued on page 129)

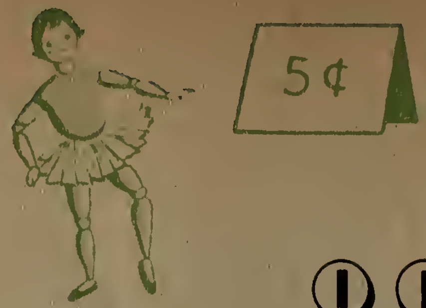
Symbolism of How Many More Are Needed (Page 70 **Numbers in Action**). Say: "Pretend that you are going to buy the jack-in-the-box. You have the pennies shown in the picture, and you are to find how many more pennies you need. Look at the first problem under the picture. Write 7 on the first answer line because the toy costs 7 cents. Write 3 on the next answer line because you have 3 cents. Write the answer to the problem where it belongs. Now in the green answer strip write the numbers that show how to find how many more pennies you need. [See that each child writes '7 − 3 = 4.'] On the answer line in the last problem write the (Directions continued on page 127)



① ① ①

____¢ − ____¢ = ____¢

____ more pennies needed



① ①

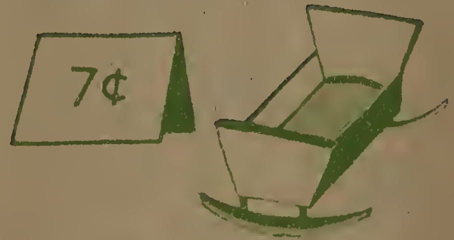
____¢ − ____¢ = ____¢

____ more pennies needed

① ① ① ①

____¢ − ____¢ = ____¢

____ more pennies needed



① ① ① ① ①

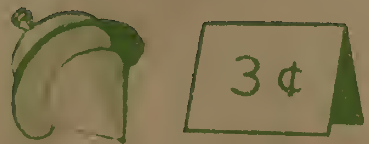
____¢ − ____¢ = ____¢

____ more pennies needed

① ① ①

____¢ − ____¢ = ____¢

____ more pennies needed



①

____¢ − ____¢ = ____¢

____ more pennies needed

A 5=2+■ ____________

B 7=4+■ ____________

C 3=1+■ ____________

D 6=3+■ ____________

E 5=4+■ ____________

F 7=2+■ ____________

G 6=1+■ ____________

H 6=4+■ ____________

I 7=3+■ ____________

J 7=5+■ ____________

K 6=2+■ ____________

L 3=2+■ ____________

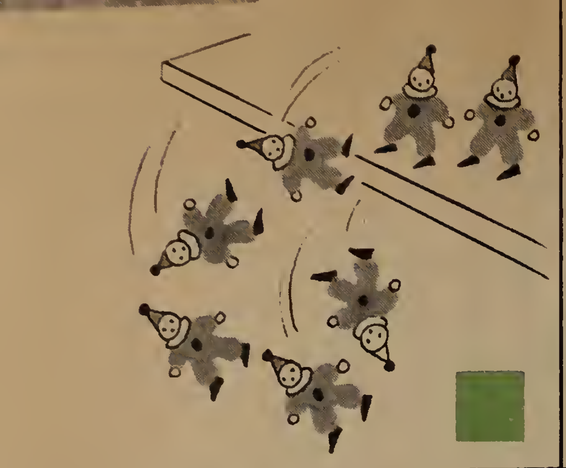
M 5=3+■ ____________

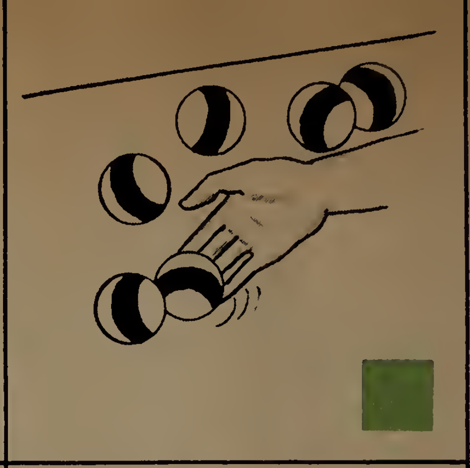
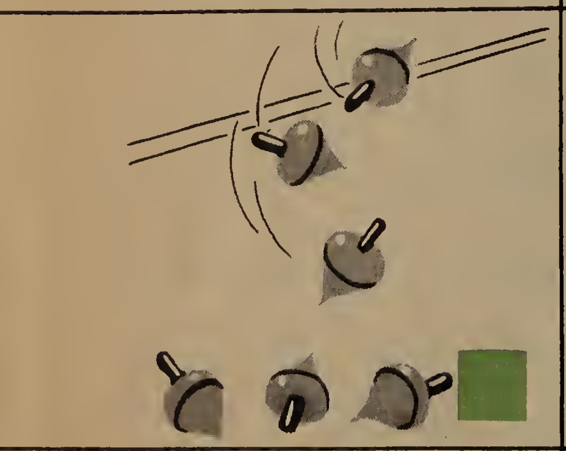
N 6=5+■ ____________

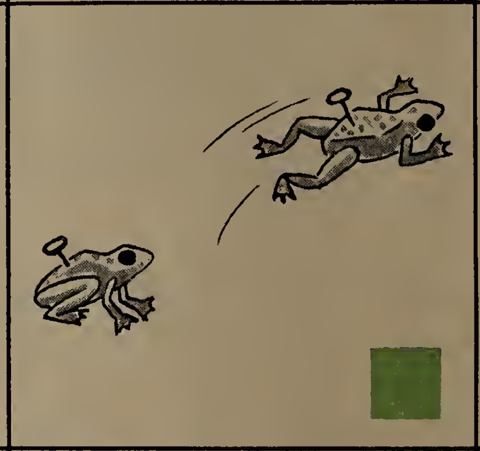
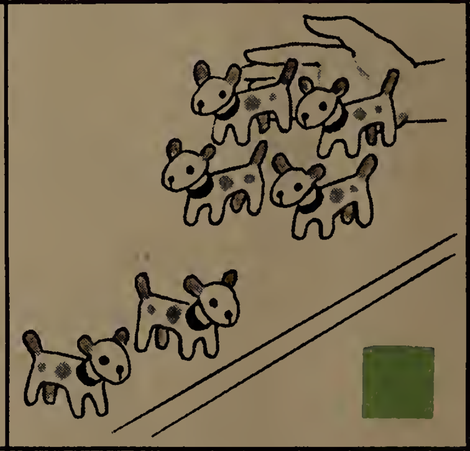
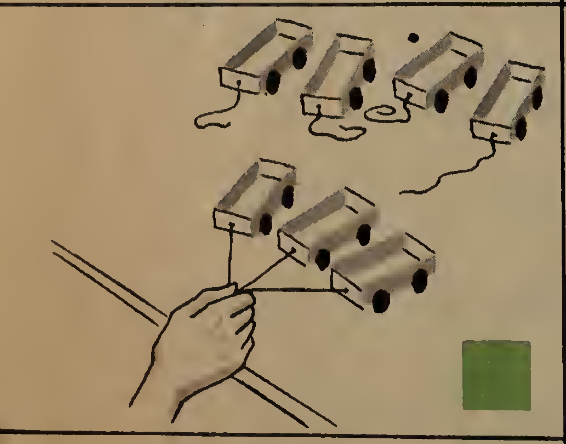
O 7=6+■ ____________

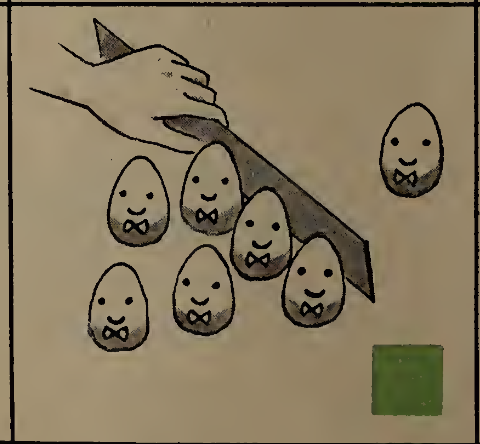
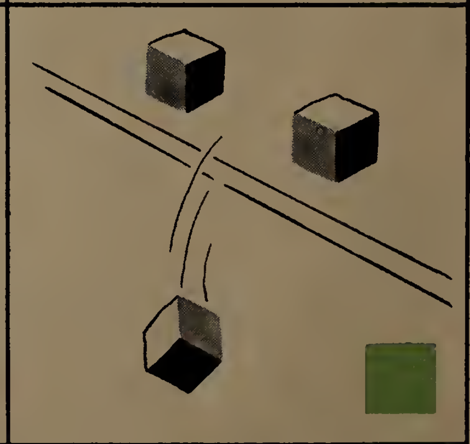
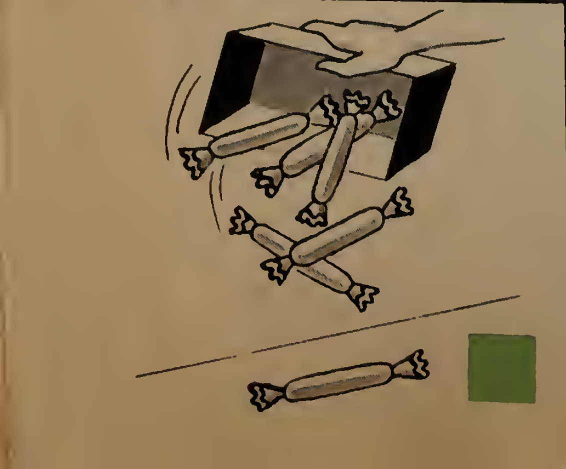
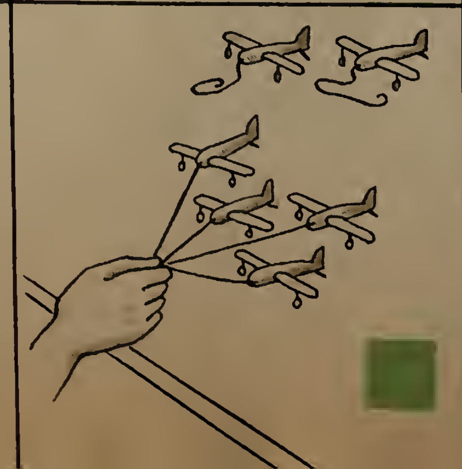
P 5=1+■ ____________

Q 7=1+■ ____________



A 3+2= ____

B 2+4= ____

C 4+3= ____

D 5−2= ____

E 1+2= ____

F 4+2= ____

G 7−6= ____

H 6−2= ____

I 3+3= ____

J 2+5= ____

K 7−5= ____

L 6−4= ____

M 3−1= ____

N 7−3= ____

O 1+5= ____

P 2−1= ____

Q 6+1= ____

Pictorial Problem Situations and Practice (Page 71 **Numbers in Action**) Direct attention to the problems with green letters (A to Q) and say: "Read Problem A. Now look at the pictures and find the picture that belongs with Problem A. Write the letter **A** in the green answer square in this picture. Write the answer to Problem A on the green answer line. Do the same for each of the other problems. If you find a problem for which there is no picture, just write the answer on the green answer line in the problem."

Practice on the 3, 5, 6, and 7 Groups (Page 72 Numbers in Action). Direct attention to the problems with green letters (A to Q). Tell the children to read each problem and write its answer on the green answer line. The children should also read each problem with a gray letter and write its answer on its green answer line. For the problems with black letters, have the children read each problem and then write the numbers they use to find the answer on the green answer line following the problem. (For black-lettered Problem A the children should write "3+4=7.") Encourage the children to work independently, but do not expect them to do all the problems in one class period.

A 1 doll plus 2 dolls is ____ dolls.
B 7 boxes minus 3 boxes are ____ boxes.
C 3 balls plus 2 balls are ____ balls.
D 5 books plus 2 books are ____ books.
E 3 bags minus 2 bags are ____ bag.
F 7 boys minus 5 boys are ____ boys.
G 3 tables minus 1 table are ____ tables.
H 1 bird plus 2 birds is ____ birds.
I 4 men plus 3 men are ____ men.
J 7 dogs minus 2 dogs are ____ dogs.
K 6 sleds plus 1 sled are ____ sleds.
L 5 girls minus 3 girls are ____ girls.
M 6 cars minus 1 car are ____ cars.
N 2 cows plus 5 cows are ____ cows.
O 1 duck plus 6 ducks is ____ ducks.
P 1 boat plus 5 boats is ____ boats.
Q 7 plants minus 1 plant are ____ plants.

A $3+4=$ ____
B $6-2=$ ____
C $7-5=$ ____
D $1+5=$ ____
E $2-1=$ ____
F $5-4=$ ____
G $4+2=$ ____
H $6+1=$ ____
I $7-4=$ ____
J $6-5=$ ____
K $2+1=$ ____
L $5-4=$ ____
M $7-1=$ ____
N $3+3=$ ____
O $1+4=$ ____
P $6-3=$ ____
Q $2+4=$ ____

A Add 3 and 4. ____
B Subtract 2 from 5. ____
C Add 4 and 1. ____
D Add 3 and 3. ____
E Subtract 1 from 5. ____
F Add 4 and 2. ____
G Subtract 4 from 6. ____
H Add 5 and 1. ____
I Subtract 4 from 7. ____
J Add 1 and 1. ____
K Add 2 and 5. ____
L Subtract 6 from 7. ____
M Add 2 and 4. ____
N Subtract 1 from 3. ____
O Add 2 and 3. ____
P Subtract 1 from 2. ____
Q Subtract 3 from 5. ____

The 8 Group: Combining Two Groups (Page 73 **Numbers in Action**) Direct attention to the picture with the green background. Say: "How many birds are there in the picture? Now look at the next picture at the right (point to it). When all the birds in this picture are together on the ground, will there be just as many birds as there are in the green picture? If there will be just as many birds, put this mark, X, in the green answer square. If there will not be just as many birds, put this mark, ≷ (scribble), in the square. For each of the other white pictures decide whether or not there will be just as many birds as there are in the green picture and put the correct mark in the answer square."

The 8 Group: Separating Into Two Groups; Comparing (Page 74 **Numbers in Action**). Get the children to notice in each of the pictures above the heavy black line that the birds are separating into two groups. Say: "Look at the first picture. How many birds were there in all before any flew away? How many are flying away? How many are left on the ground? Write the number of birds left on the ground on the green answer line. Do the same things for all the pictures above the heavy black line." The six pictures below the heavy black line may be handled in much the same way as the exercises on pages 56-58. In each of these pictures (Directions continued on page 129)

____ birds left

____ birds left

____ birds left

____ birds left

____ bird left

____ birds left

____ birds left

____ birds left

Subtract ____ dogs.

____ more dogs than rabbits

Subtract ____ ducks.

____ more ducks than birds

Subtract ____ rabbits.

____ more rabbit than dogs

Subtract ____ birds.

____ more birds than rabbits

Subtract ____ dogs.

____ more dogs than ducks

Subtract ____ ducks.

____ more ducks than birds

____ birds in all

____ more chickens than rabbits

____ bears will be left.

____ kittens in all

____ more rabbits than birds

____ pigs in all

____ squirrels will be left.

____ more ducks than birds

____ dogs in all

____ turtles in all

____ more birds than rabbits

____ cow will be left.

A 1+6=___
B 2−1=___
C 8−6=___
D 4+4=___
E 5−3=___
F 6+2=___
G 5−4=___
H 8−7=___
I 4+2=___
J 3+3=___
K 6−4=___
L 8−3=___
M 5+3=___
N 6−2=___
O 7+1=___
P 3+4=___
Q 8−1=___

A 1+1=___
B 8−2=___
C 7−2=___
D 2+1=___
E 3+5=___
F 7−4=___
G 3+2=___
H 8−5=___
I 7−3=___
J 1+4=___
K 7−6=___
L 2+4=___
M 8−4=___
N 4+3=___
O 6−5=___
P 2+6=___
Q 2+5=___

Facts (Page 5 Numbers In Action). Say: "Read the problem in the first picture. Look at the picture. In the green answer strip write the numbers that you use to find how many birds there will be in all. [The children should write '6 + 2 = 8.'] Now read the problem again and read the problem. Then write, in the answer strip, the numbers you need to use. After that, write the answer for the problem you read." For the problems with the green and the gray letters (A to Q) have the children read each one and write its answer on the answer line.

The 8 Group: How Many More Are Needed (Page 76 *Numbers in Action*). Adapt the directions for page 59 to this page. Have the children read the problems in the first picture and write the correct numbers on the answer lines. They then should use the picture of objects at the right to find the answers for the two problems in this second picture. They should cross off objects (or coins in some pictures) to find how many more are needed to fill the container or to buy a given article. Answers should be written on the answer lines.

This box is for ____ dogs.
There are ____ dogs.

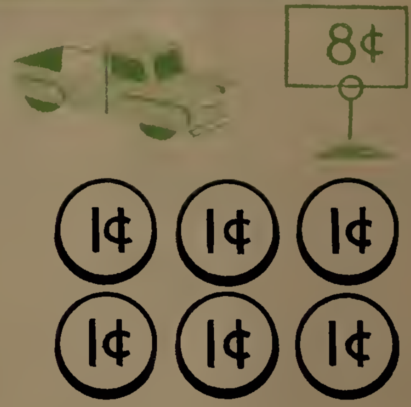
8 dogs – ____ dogs =
____ dogs
____ more dogs are needed.

____ pennies will buy
the doll.
There are ____ pennies.

7 pennies – ____ pennies =
____ pennies
____ more pennies are needed.

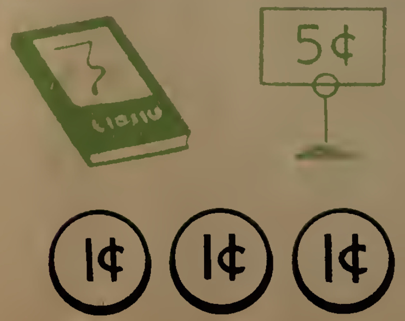
This box is for ____ balls.
There is ____ ball.

8 balls – ____ ball =
____ balls
____ more balls are needed.



____ pennies will buy
the car.
There are ____ pennies.

8 pennies – ____ pennies =
____ pennies
____ more pennies are needed.

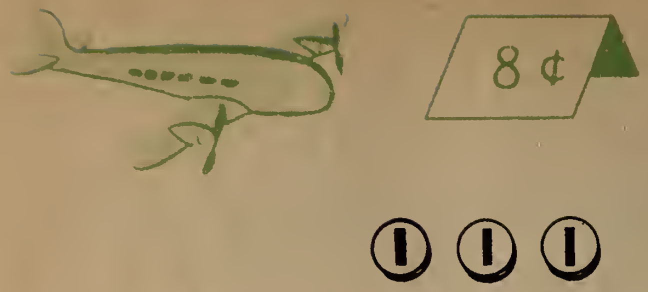


____ pennies will buy
the book.
There are ____ pennies.

5 pennies – ____ pennies =
____ pennies
____ more pennies are needed.

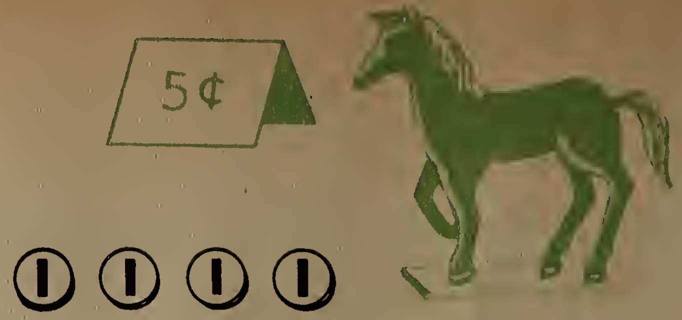
This box is for ____ cows.
There are ____ cows.

6 cows – ____ cows =
____ cow
____ more cow is needed.



____¢ – ____¢ = ____¢

____ more cents are needed.

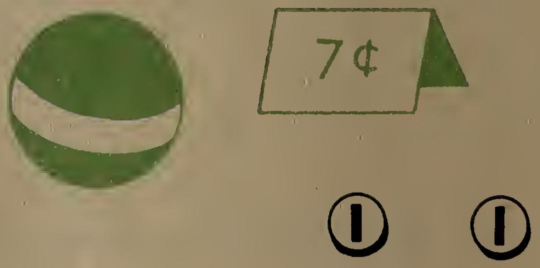


____¢ – ____¢ = ____¢

____ more cent is needed.

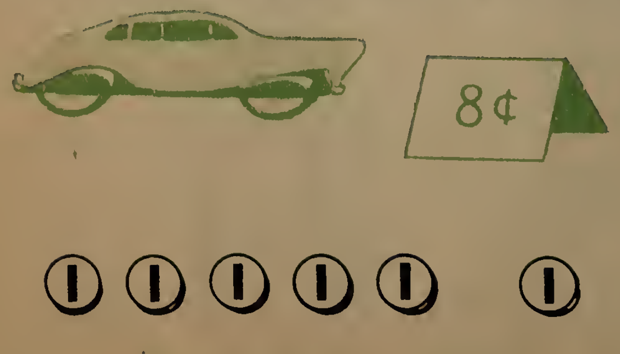
____¢ – ____¢ = ____¢

____ more cents are needed.



____¢ – ____¢ = ____¢

____ more cents are needed.



____¢ – ____¢ = ____¢

____ more cents are needed

____¢ – ____¢ = ____¢

____ more cents are needed.

A 8=5+▇ ____________

B 3=1+▇ ____________

C 8=3+▇ ____________

D 6=5+▇ ____________

E 2=1+▇ ____________

F 8=7+▇ ____________

G 7=6+▇ ____________

H 5=3+▇ ____________

I 8=1+▇ ____________

J 6=3+▇ ____________

K 6=2+▇ ____________

L 8=4+▇ ____________

M 5=2+▇ ____________

N 6=4+▇ ____________

O 8=6+▇ ____________

P 8=2+▇ ____________

Q 7=4+▇ ____________

[illegible] Adapt the directions given for page 61 to this page. Tell the children to pretend that they are going to buy each of the toys pictured. For each picture they first write the correct numbers on the answer lines in the first problem. Next they write, in the green answer

Finally they write the correct number on the answer line in the last problem. For each green lettered problem (A to Q) have the children write on the green answer line the subtraction basic fact used to find the number that belongs where the screen is.

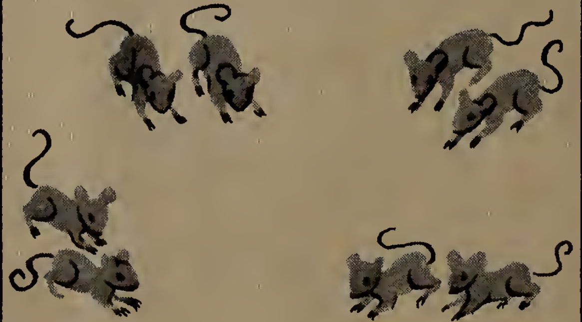
The 8 Group: Combining Equal Groups; Symbolism (Page 78 **Numbers in Action**). Say: "How many groups of frogs are in the first picture? How many frogs are in each group? Now read the problems printed in green in this picture. Write the correct number on each answer line. The picture will help you decide what numbers belong on the lines. Do the same things for each of the other pictures." Each green-lettered problem (A to Q) should be read silently by the children, who then should write the correct number on the answer line.

____ groups of frogs
____ frogs in each group
____ frogs in all
4 twos = ____

____ groups of dogs
____ dogs in each group
____ dogs in all
2 threes = ____

____ groups of ducks
____ ducks in each group
____ ducks in all
2 fours = ____

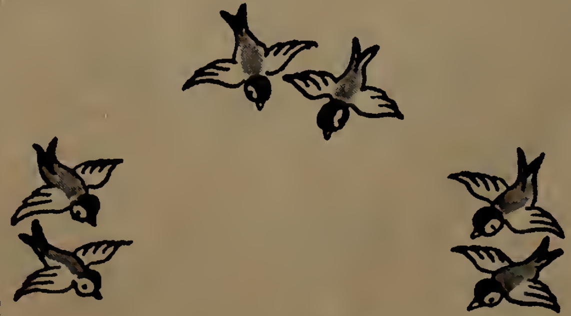
____ groups of cows
____ cows in each group
____ cows in all
3 twos = ____



____ groups of mice
____ mice in each group
____ mice in all
4 twos = ____

____ groups of horses
____ horses in each group
____ horses in all
2 threes = ____

____ groups of pigs
____ pigs in each group
____ pigs in all
4 twos = ____



____ groups of birds
____ birds in each group
____ birds in all
3 twos = ____

____ groups of bears
____ bears in each group
____ bears in all
2 fours = ____

A 3 twos = ____
B 4 quarts = ____ pints
C 4+2 = ____
D 5−3 = ____
E 2 fours = ____
F 2 nickels = ____ cents
G 1 dime = ____ nickels
H 2 threes = ____
I 5−4 = ____
J 3+3 = ____
K 7−4 = ____
L 4 twos = ____
M 6 pints = ____ quarts
N 2−1 = ____
O 7−6 = ____
P 2+4 = ____
Q 7−3 = ____

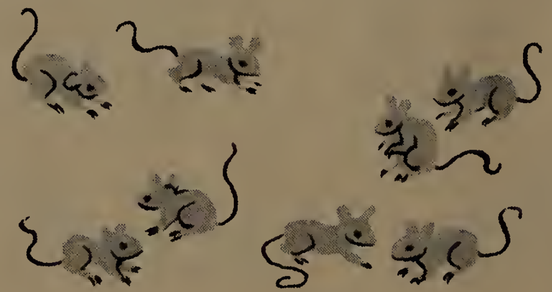
____ frogs in all
Put 2 frogs in each group.
____ groups of 2 frogs
8= ____ twos

____ bears in all
Put 3 bears in each group.
____ groups of 3 bears
6= ____ threes

____ cows in all
Put 4 cows in each group.
____ groups of 4 cows
8= ____ fours

____ dogs in all
Put 4 dogs in each group.
____ groups of 4 dogs
8= ____ fours

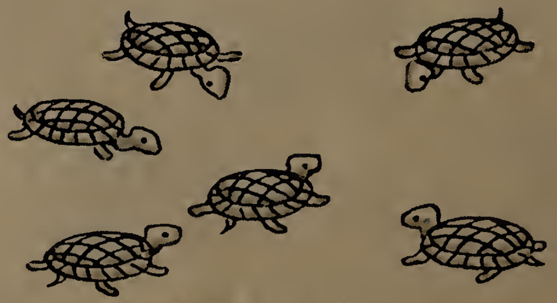
____ kittens in all
Put 2 kittens in each group.
____ groups of 2 kittens
6= ____ twos



____ mice in all
Put 2 mice in each group
____ groups of 2 mice
8= ____ twos

____ pigs in all
Put 3 pigs in each group
____ groups of 3 pigs
6= ____ threes

____ ducks in all
Put 4 ducks in each group.
____ groups of 4 ducks
8= ____ fours



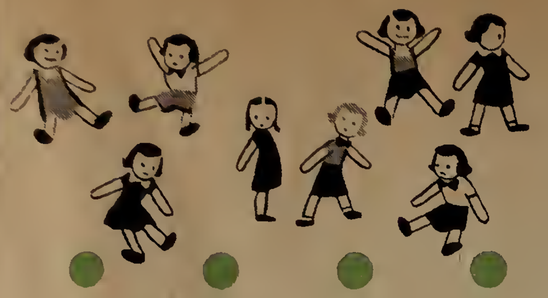
____ turtles in all
Put 2 turtles in each group
____ groups of 2 turtles
6= ____ twos

A 6= ____ twos
B 8= ____ fours
C 6−4= ____
D 2 threes= ____
E 4 quarts= ____ pints
F 2 dimes= ____ nickels
G 5−1= ____
H 6= ____ threes
I 8= ____ twos
J 4+4= ____
K 2 fours= ____
L 3 twos= ____
M 10 pennies= ____ nickels
N 6+2= ____
O 4 twos= ____
P 3+4= ____
Q 5−3= ____

Numbers in Action!. Say: "Read the first line printed in green in the picture of the frogs. How many frogs are in the picture? Write the number on the answer line. What does the next line tell you to do? Draw a circle around each group of two frogs. Read the third line.

are. Now write the correct number on the last answer line. Do the same things for each of the other pictures." In the green lettered problems A to Q, the child first reads each problem silently. He then writes on the answer line the number that answers the problem.

Pictorial Problem Situations and Practice (Page 81 Numbers in Action). Direct attention to the first picture and say: "Read the first part of the problem in this picture and write the number that tells how many dolls there are in all. Now read the next part of the problem. The green dots under the dolls tell you how many equal groups of dolls you are to make. Write this number on the answer line. To make the groups, draw a line from a doll to the first dot. Then draw another line from a different doll to the second dot. Keep on drawing lines until you have joined a doll to each of the four dots. Now draw a line from another doll to the first dot, and so on (Directions continued on page 129)



____ dolls in all

Make ____ equal groups.

____ dolls in each group

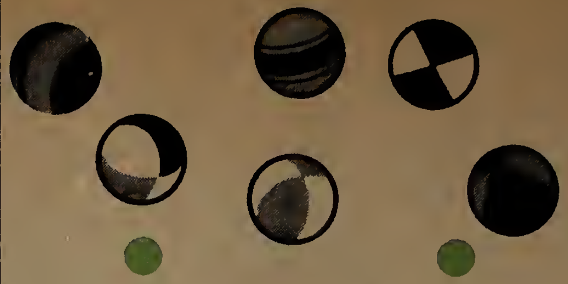
8=4 groups of ____

____ cars in all

Make ____ equal groups.

____ cars in each group

8=2 groups of ____



____ balls in all

Make ____ equal groups.

____ balls in each group

6=2 groups of ____

____ boats in all

Make ____ equal groups.

____ boats in each group

8=2 groups of ____

____ books in all

Make ____ equal groups.

____ books in each group

6=3 groups of ____

____ blocks in all

Make ____ equal groups.

____ blocks in each group

6=2 groups of ____

____ ducks in all

Make ____ equal groups.

____ ducks in each group

8=4 groups of ____

____ sleds in all

Make ____ equal groups.

____ sleds in each group

8=2 groups of ____

____ wagons in all

Make ____ equal groups.

____ wagons in each group

6=3 groups of ____

A 6=3 twos threes

B 8= ____ twos

C 6= ____ twos

D 2 fours= ____

E 7−3= ____

F 6−1= ____

G 3 twos= ____

H 8=2 twos fours

I 5+1= ____

J 6=2 twos threes

K 5−2= ____

L 4 twos= ____

M 2−1= ____

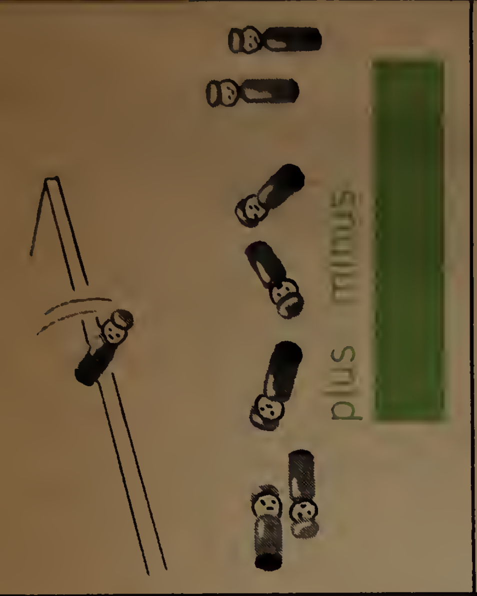
N 8−4= ____

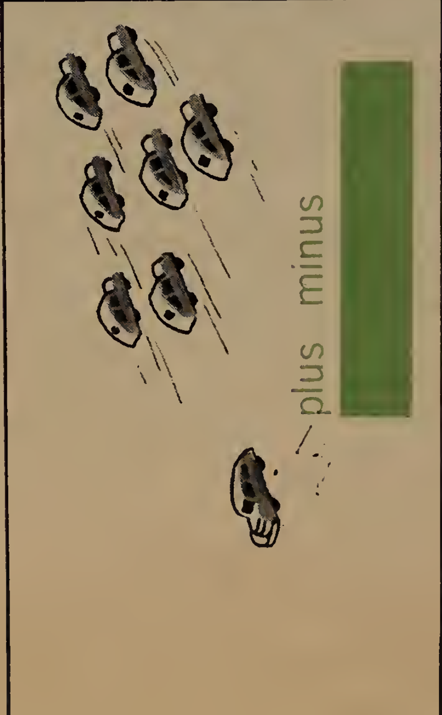
O 3+5= ____

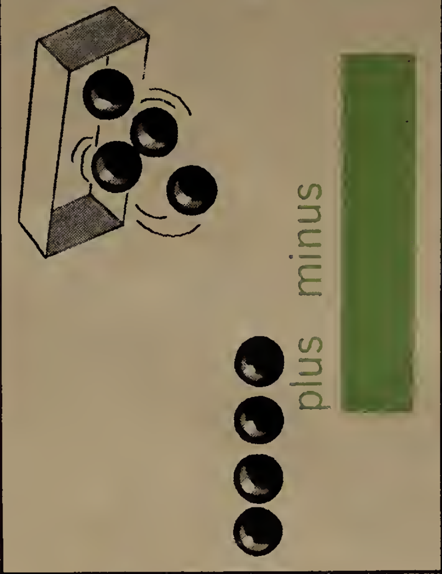
P 8−7= ____

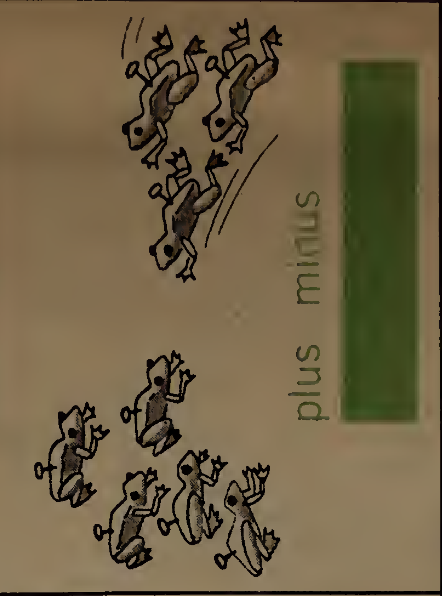
Q 8=4 twos fours

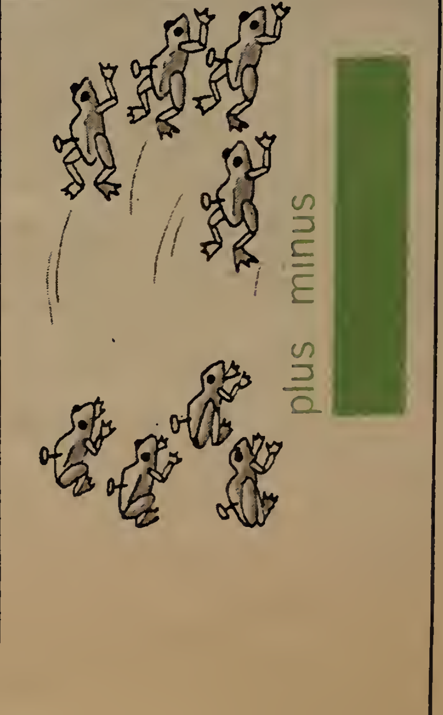
Action Problem Situations for the 8 Group (Page 67 Numbers in Action). Get the children to notice that in some pictures a group of objects is being added to another group, while in others a group is being removed. Say: "Look at the first picture. Are the jumping frogs joining the others or are they going away? Only one of the two words printed in green belongs with this picture. Cross off the word that does not belong. How many frogs were there at first? How many are joining them? How many frogs will there be in all? Now write, in the green answer strip, the problem that belongs with this picture [6 + 2 = 8]. Do these same things for each picture."

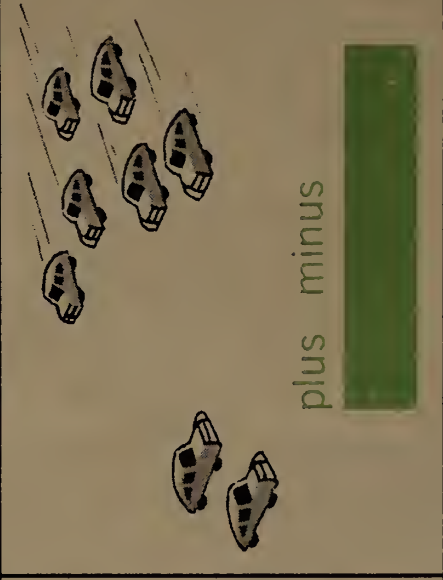


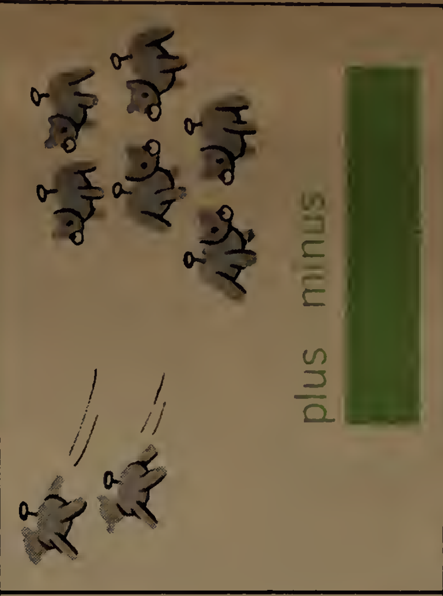


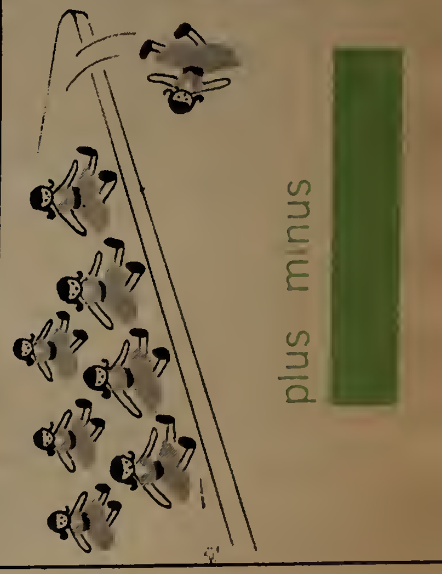


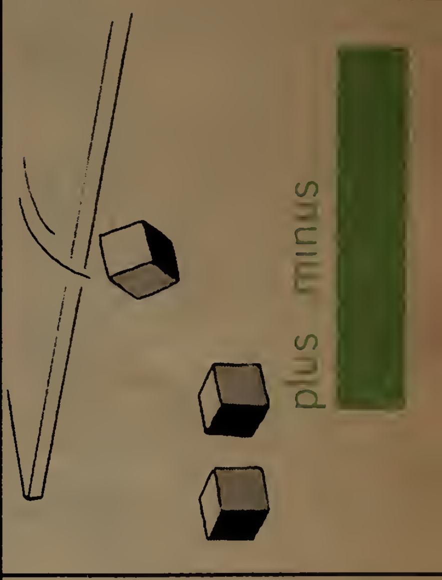












Practice for the 3, 5, 6, 7, and 8 Groups (Page 83 **Numbers in Action**). Use directions similar to those provided for page 63. Give separate directions for each column of problems, identifying them by their colored letters, green, gray, and black. Remember that in the column of problems with black letters the children are to write the basic fact for each problem on the green answer line following the problem. Encourage the children to work independently as much as possible, but do not expect them to do all the problems in one class period.

A 8 bears minus 1 bear are ____ bears.
B 2 plants plus 4 plants are ____ plants.
C 4 men plus 4 men are ____ men.
D 7 girls minus 5 girls are ____ girls.
E 8 mice minus 3 mice are ____ mice.
F 5 dogs minus 1 dog are ____ dogs.
G 8 birds minus 5 birds are ____ birds.
H 2 pigs plus 6 pigs are ____ pigs.
I 7 frogs plus 1 frog are ____ frogs.
J 6 dolls minus 4 dolls are ____ dolls.
K 2 cars plus 1 car are ____ cars.
L 5 balls minus 2 balls are ____ balls.
M 8 beds minus 2 beds are ____ beds.
N 3 books plus 2 books are ____ books.
O 4 tables plus 3 tables are ____ tables.
P 8 boats minus 6 boats are ____ boats.
Q 5 apples plus 1 apple are ____ apples.

A $6+2=$ ____
B $8-7=$ ____
C $7-4=$ ____
D $5+3=$ ____
E $4+2=$ ____
F $5-3=$ ____
G $7+1=$ ____
H $8-4=$ ____
I $2+6=$ ____
J $5-4=$ ____
K $3+5=$ ____
L $7-3=$ ____
M $8-6=$ ____
N $1+7=$ ____
O $3-2=$ ____
P $8-5=$ ____
Q $2+5=$ ____

A Subtract 2 from 8. ____
B Add 5 and 3. ____
C Subtract 6 from 7. ____
D Subtract 3 from 6. ____
E Add 3 and 4. ____
F Add 1 and 7. ____
G Subtract 1 from 8. ____
H Add 3 and 3. ____
I Subtract 3 from 8. ____
J Subtract 7 from 8. ____
K Add 4 and 4. ____
L Add 1 and 5. ____
M Add 6 and 2. ____
N Subtract 2 from 7. ____
O Add 3 and 5. ____
P Subtract 4 from 8. ____
Q Subtract 5 from 6. ____

____ groups of cows
____ cows in each group
____ cows in all
2 twos = ____

____ rabbits in all
____ rabbits running away
____ rabbit left
4 − ____ = ____

____ pigs eating
____ pig running to eat
____ pigs will be eating.
3 + ____ = ____

____ dogs in all
____ groups of dogs
____ dogs in each group
4 = 2 twos fours

____ horses eating
____ horses running to eat
____ horses will be eating.
2 + ____ = ____

____ kittens in all
____ kitten running away
____ kittens left
4 − ____ = ____

____ ducks in all
____ ducks in each group
____ groups of ducks
4 = ____ twos

____ chicken eating
____ chickens running to eat
____ chickens will be eating.
1 + ____ = ____

____ bears in all
____ bears running away
____ bears left
4 − ____ = ____

A 4 − 3 = ____
B 2 + 5 = ____
C 6 − 2 = ____
D 1 + 3 = ____
E 8 − 2 = ____
F 2 twos = ____
G 2 + 6 = ____
H 4 − 1 = ____
I 6 = 2 twos threes
J 2 + 2 = ____
K 4 = 2 fours twos
L 7 − 1 = ____
M 8 = ____ fours
N 4 = ____ twos
O 6 = 3 twos threes
P 3 + 1 = ____
Q 4 − 2 = ____

[illegible] in Ar[illegible] In the first pi[illegible] [illegible] how many groups of cows are there? How many cows are in each group? How many are there in all? Now read the problems printed in green in this picture. Write the correct number on each answer line.'' When the children come to the picture of the dogs, explain that they [illegible] not belong in the problem.

Each of the green-lettered problems (A to Q) should first be read silently by the children. They then should either write the answer on the answer line or, in some of the problems, cross off the word that does not belong in the problem.

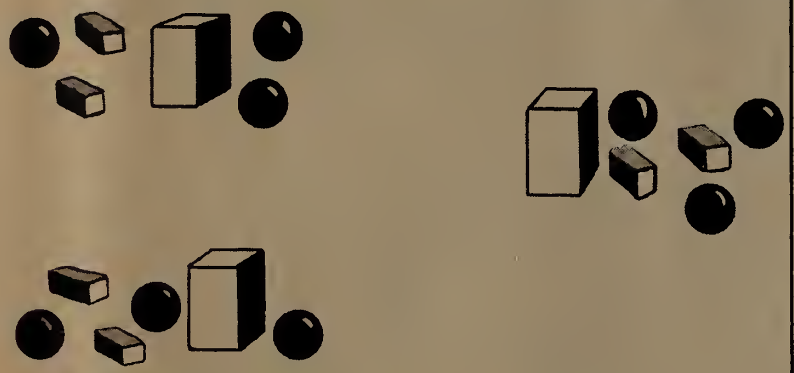
[illegible] tion to the first picture and say: "There are three groups of toys in this picture. Draw a circle around each group. Now read the first problem printed in green in this picture. Look again at the toys. Does each group have balls in it? Decide if each group of toys has the same

[illegible] On the second answer line write the number of toys in all in each group. Now read the next problem. Does each group have boats in it? If each group has the same number of boats, write this number on the first answer line. What number (Directions continued on page 127)

____ balls for each ____ toys
____ boats for each ____ toys
____ big balls for each ____ toys

____ cars for each ____ toys
____ blocks for each ____ toys
____ big blocks for each ____ toys

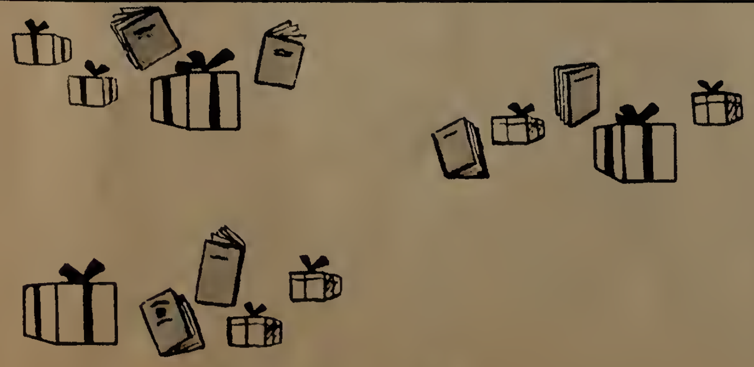
____ boxes for each ____ toys
____ little boxes for each ____ toys
____ boats for each ____ toys



____ balls for each ____ toys
____ blocks for each ____ toys
____ little blocks for each ____ toys

____ blocks for each ____ toys
____ big blocks for each ____ toys
____ book for each ____ toys

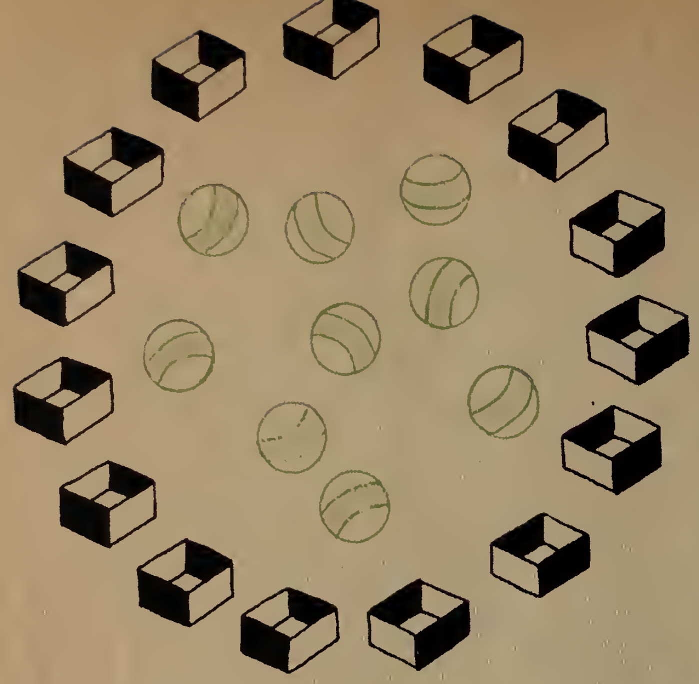
____ boats for each ____ toys
____ cars for each ____ toys
____ little boats for each ____ toys



____ books for each ____ toys
____ boxes for each ____ toys
____ little boxes for each ____ toys

____ blocks for each ____ toys
____ balls for each ____ toys
____ little balls for each ____ toys

____ boats for each ____ toys
____ big boats for each ____ toys
____ little boats for each ____ toys

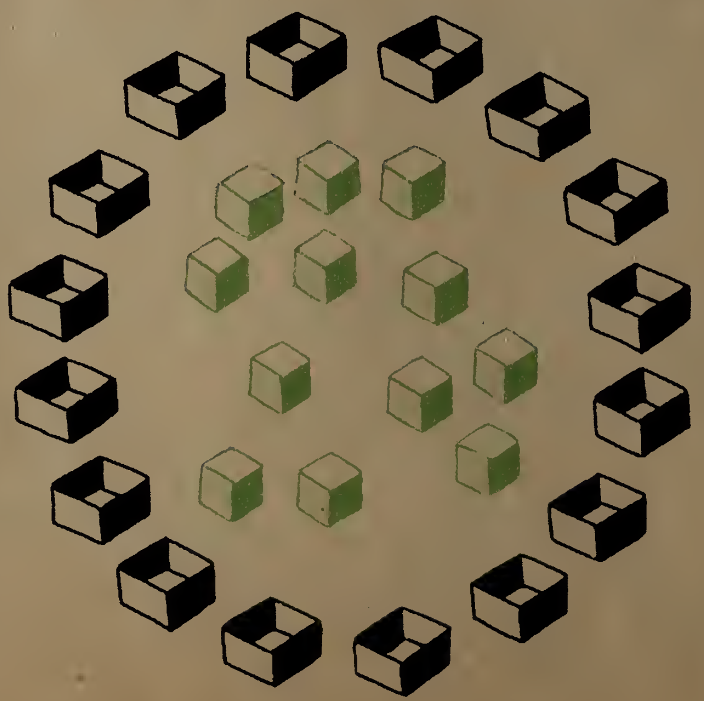


____ balls for each group of 5 boxes

____ apples for each group of 3 boxes

____ dolls for each group of 4 boxes

____ cars for each group of 6 boxes



____ blocks for each group of 4 boxes

____ plants for each group of 5 boxes

[illegible] The problem printed in green tells you [illegible] the boxes should be in groups of five. Draw a ring around each [illegible] of five boxes. How many groups are there? Now you are to find [illegible] if you can put the same number of green balls with each group of by drawing a line from a ball to a group of boxes. Put a ball with each of the other groups of boxes by drawing lines between them. Keep on drawing lines between balls and groups of boxes until you have used up all the balls. You will

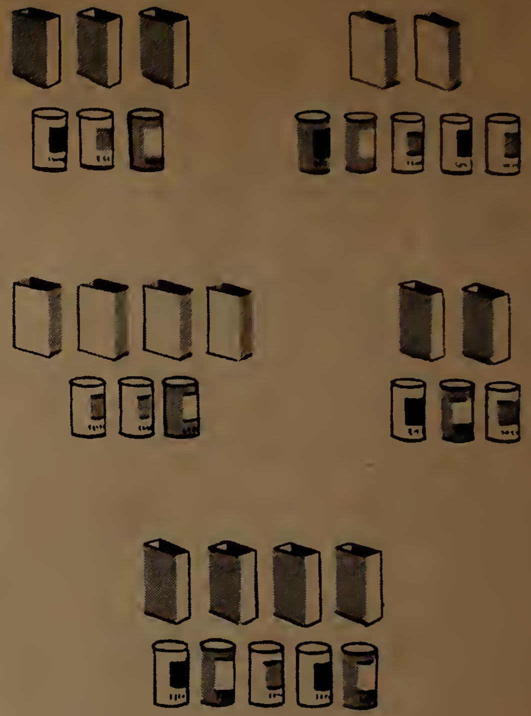
(Directions continued on page 129)

Pictorial Problem Situations for Ratio (Page 88 Numbers in Action). Direct attention to the first picture and say: "The words printed in green tell you that in each row of apples and bags there should be just two apples for each three bags. You are to cross off enough apples or bags in each row to make the statement true. Sometimes you may have to cross off both apples and bags so that each row will show two apples for each three bags." When the children have finished the first picture, direct them to proceed with each of the other pictures in a similar way—crossing off objects to make the statement in the picture true.


2 apples for each 3 bags


2 big boxes for each 4 boxes

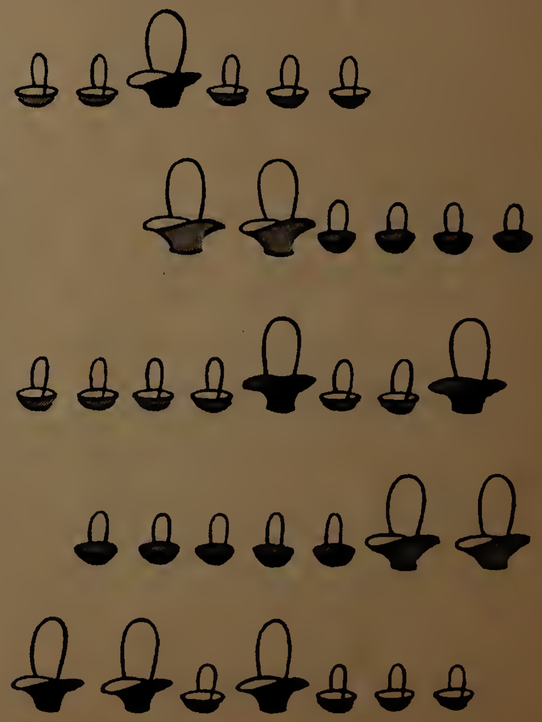

3 little balls for each 5 balls


2 boxes for each 3 cans


4 sleds for each 3 dolls


5 boxes for each 2 wagons


1 long umbrella
for each 3 umbrellas


4 little baskets
for each 5 baskets

____ bears in all

____ bear going away

____ bears left

3 − ____ = ____

____ horses eating

____ horses running to eat

____ horses will be eating.

6 + ____ = ____

____ cows eating

____ cows running to eat

____ cows will be eating.

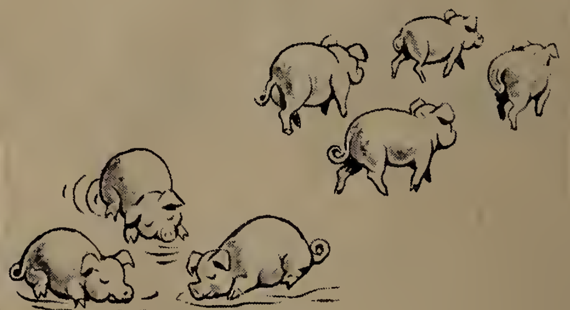
4 + ____ = ____

____ groups of dogs

____ dogs in each group

____ dogs in all

3 twos = ____



____ pigs in all

____ pigs going away

____ pigs left

7 − ____ = ____

____ groups of pigs

____ pigs in each group

____ pigs in all

2 fours = ____

____ cows in all

____ cows going away

____ cows left

6 − ____ = ____

____ groups of horses

____ horses in each group

____ horses in all

2 twos = ____

____ dogs playing

____ dogs running to play

____ dogs will be playing.

5 + ____ = ____

A 6 − 1 = ____

B 4 twos = ____

C 8 − 1 = ____

D 4 = ____ twos

E 5 + 1 = ____

F 8 = 4 twos fours

G 2 + 2 = ____

H 2 + 6 = ____

I 8 − 7 = ____

J 2 twos = ____

K 6 = 3 threes twos

L 1 + 3 = ____

M 2 fours = ____

N 1 + 7 = ____

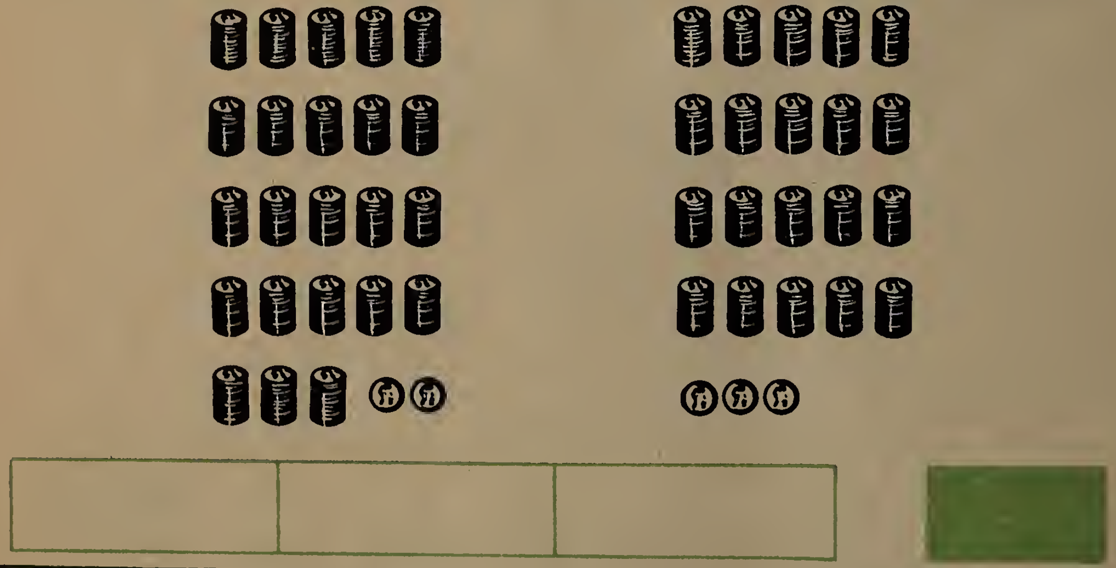
O 4 = 2 fours twos

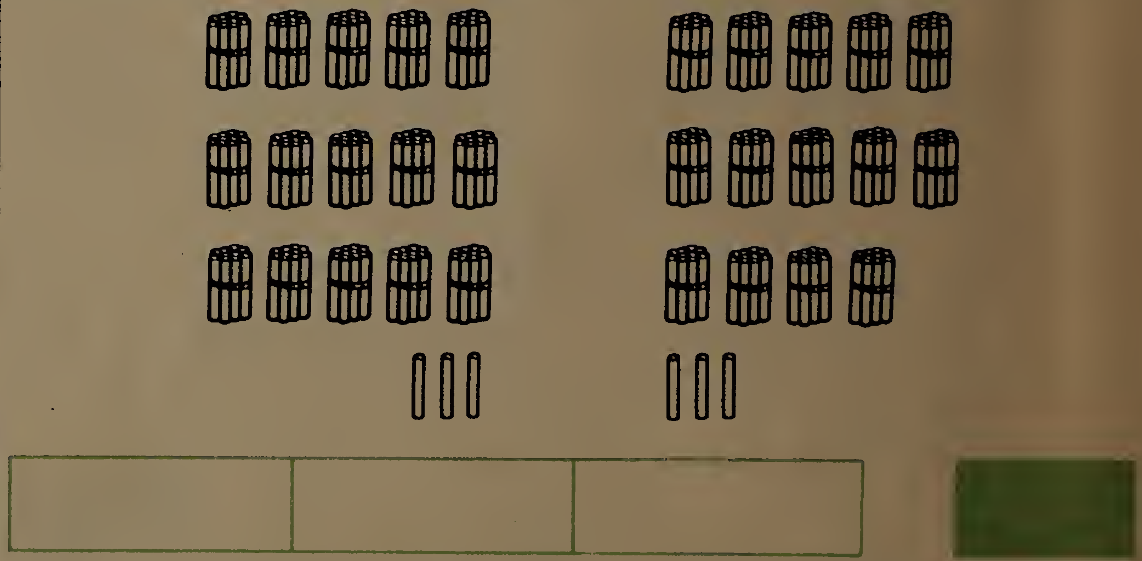
P 8 − 5 = ____

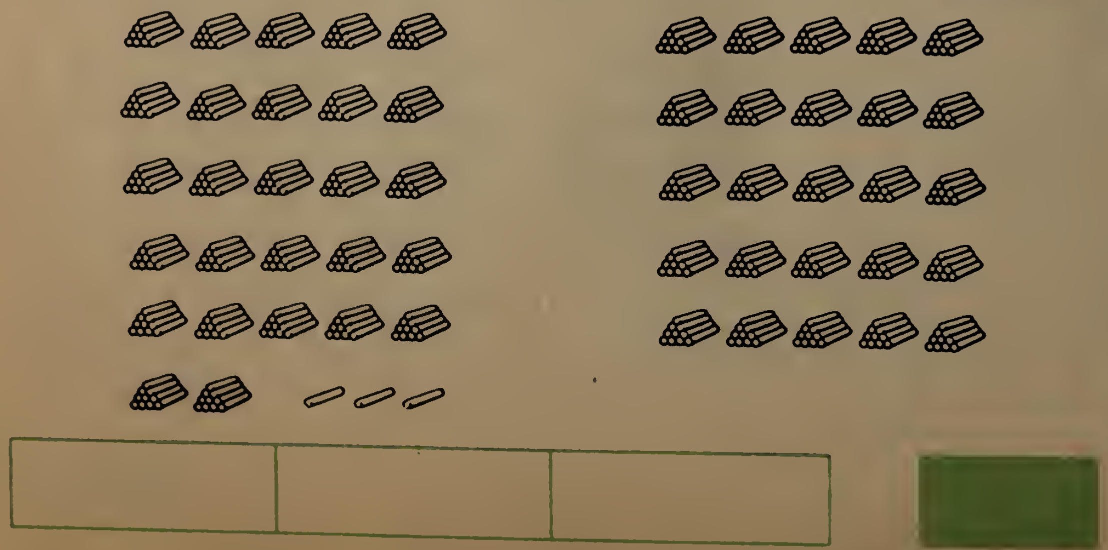
Q 3 + 1 = ____

the problem printed in green in the first picture. Write on the answer line the number that tells how many bears in all there were. Now read the next two parts of the problem and write the correct numbers on the answer lines. In the last write the answer for this part where it belongs. Do the same things for the problem in each of the other pictures." When the children have finished with the pictures, they are to write the answers for Problems A to Q at the right, or cross off the words that do not belong.

Grouping by Hundreds, Tens, and Ones (Page 91 **Numbers in Action**). Say: "Look at the first picture. There are ten sticks in each bundle. First make as many groups of one hundred sticks as you can. Do this by drawing rings around groups of ten bundles. [Check to make sure that each child encircles two groups of one hundred sticks each.] Now in the left part of the white answer strip (point to it) make a tally mark for each group of one hundred sticks. Are there any bundles of ten sticks that are not in a group of one hundred? In the middle part of the white answer strip make a tally mark for each bundle of ten sticks that is not in a group of one (Directions continued on page 127)

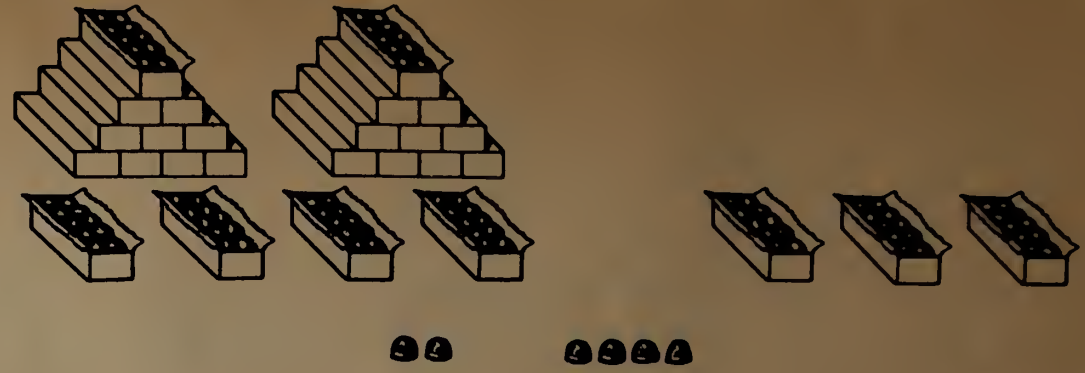


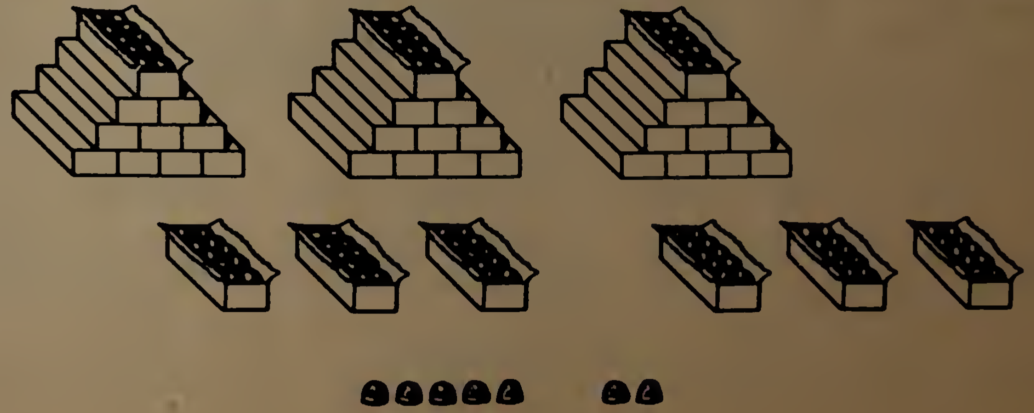


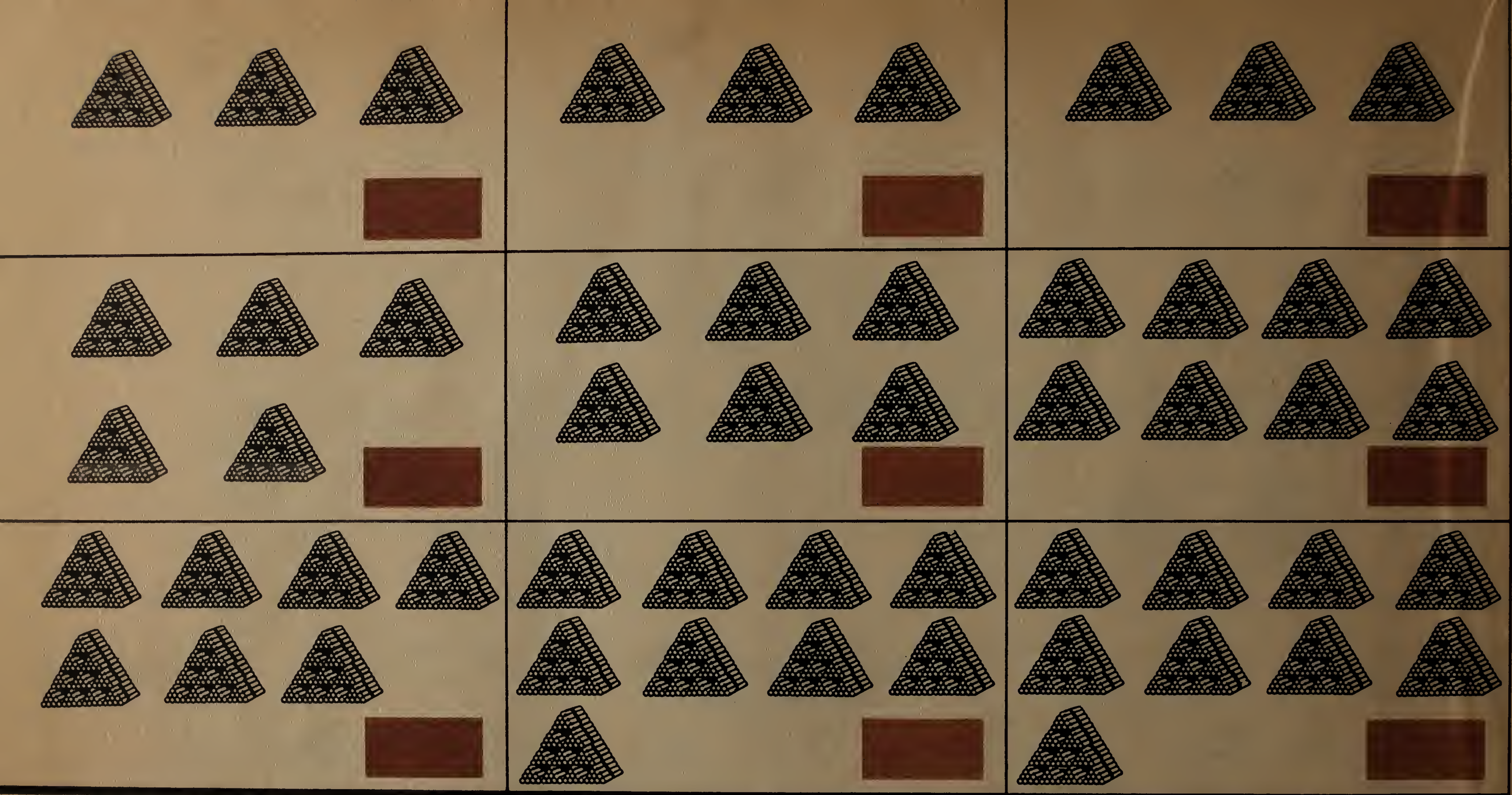


Grouping by Hundreds, Tens, and Ones (Page 91 **Numbers in Action**) The directions for page 79 may be used with this page also. Be sure the children encircle each group of one hundred objects in a picture before they make the necessary tally marks for hundreds, tens, and ones in the white answer strip. Encourage them to recognize groups of one hundred (ten bundles of ten each) without counting.

Grouping by Hundreds, Tens, and Ones (Page 92 **Numbers in Action**). You may adapt the directions given for pages 79 and 80 to the work on this page. Here, however, since the objects are arranged in piles of one hundred, the children will not be required to circle each group of one hundred. Be sure they understand and accept the groups of one hundred before they begin to make their tally marks.







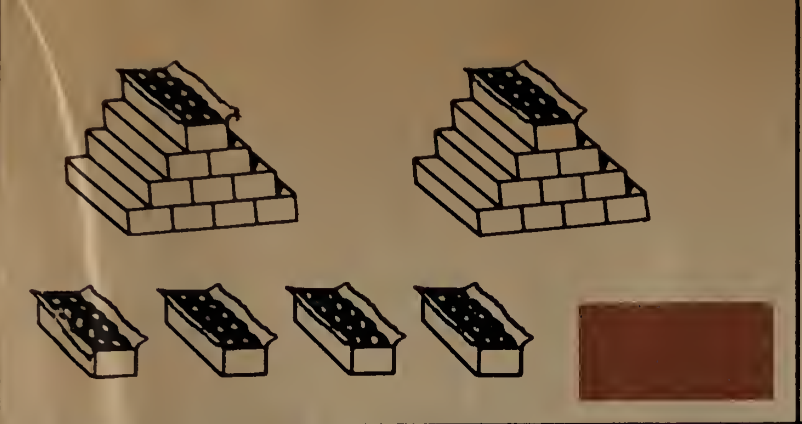
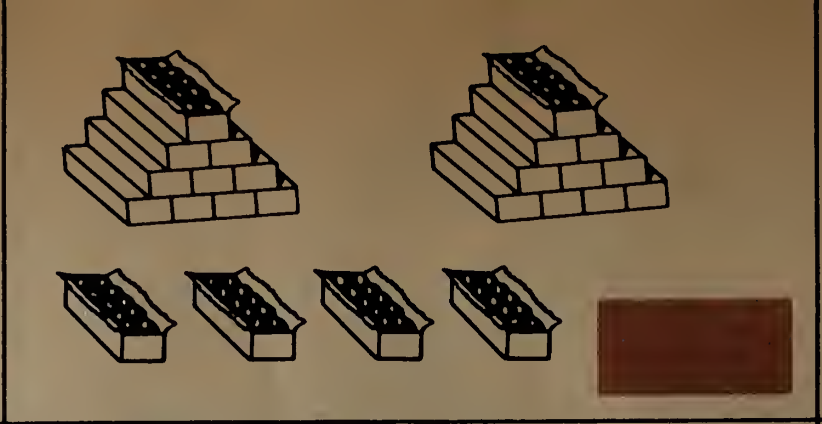
A	100	300	200	500	800	600	700	900
B	300	400	600	200	800	900	700	
C	100	200	400	700	500	700	400	900
D	100	500	200	400	600	900	700	200
E	200	300	800	500	400	700	100	900

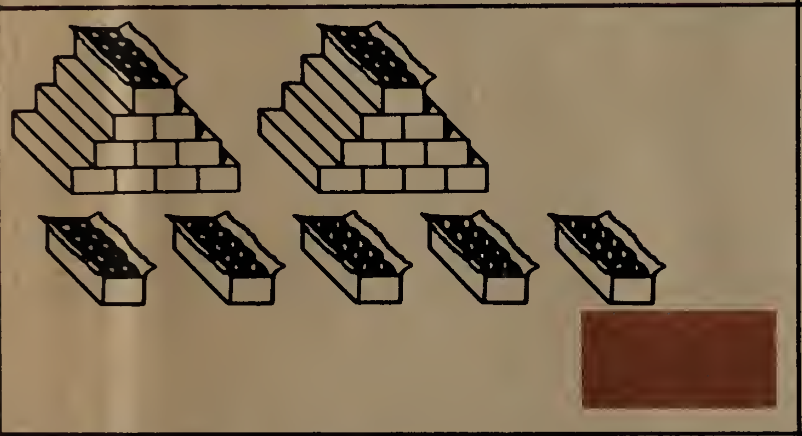
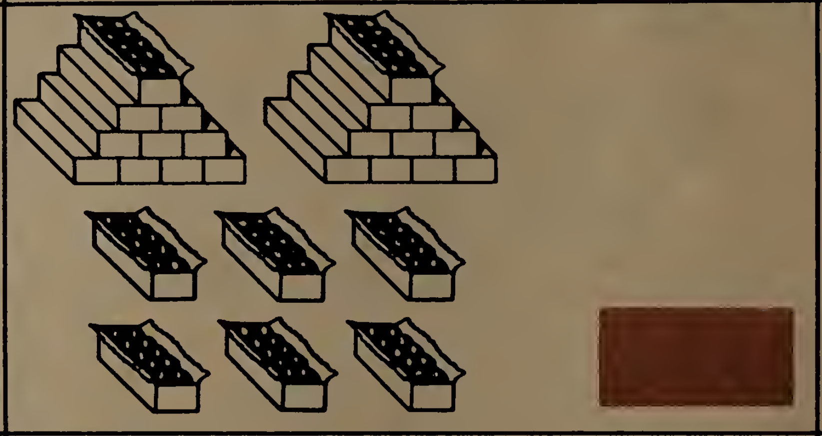
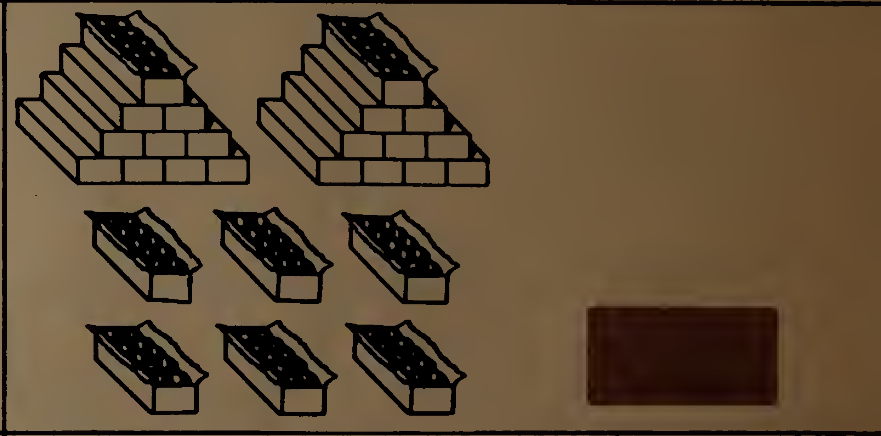
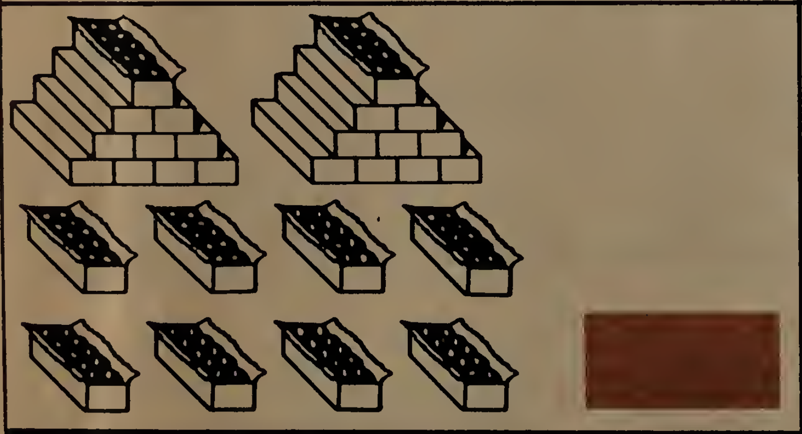
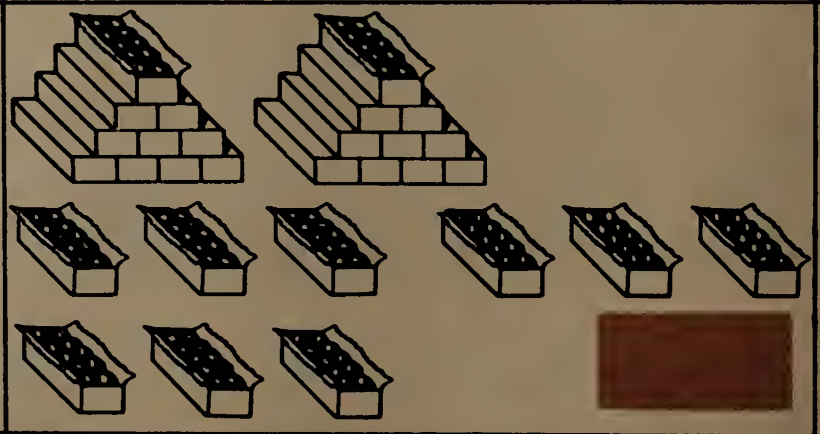
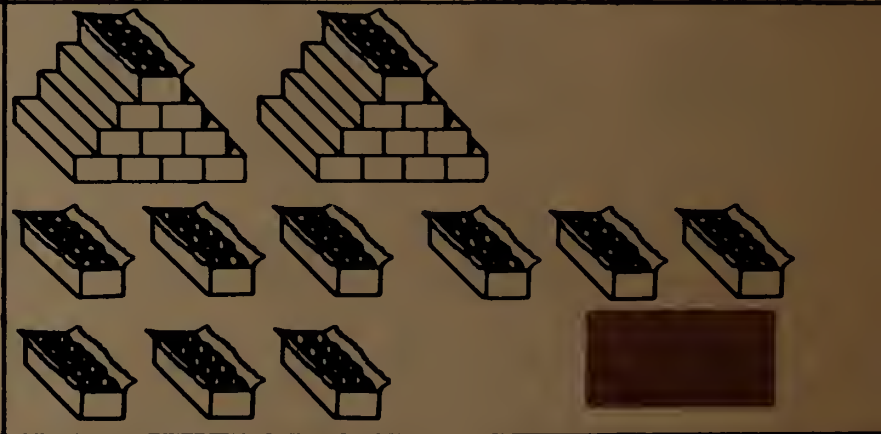
ments similar to those for page 31, with adaptations to make them fit the hundreds. The first picture of sticks should show one hundred; the second (working horizontally), two hundred; and so on, through nine hundred. The children are to cross off, when necessary, enough

number that belongs in the sequence. They should write that number in the brown answer strip. The numbers in Rows A to E are to be put in order by hundreds, starting with the number shown and ending with 900. The children should cross off and write in numbers where necessary.

bers in Action). Use the directions given for pages 31 and 82, with adaptations to make them fit the decades within two hundred. The first picture should show two hundred ten pieces of candy; the second (working horizontally), two hundred twenty; and so on, through two

in each picture so that those left will show the number that belongs in the sequence. That number should be written in the brown answer strip. The numbers in Rows A to E are to be put in order by decades. The children should cross off and write in numbers to put them in order.

A 120 140 150 170 130 190

B 110 120 140 160 170 190

C 110 130 150 170 180 110 190

D 120 140 150 160 180 130 190

E 120 130 140 170 150 160 180

Symbolism of the Decades Within Any Hundred (Page 94 Numbers In Action) The directions given for page 34 may be adapted to the work on this page. Have the children put the numbers in each row in order by writing in and crossing off numbers as necessary to maintain the number sequence. Be sure the children understand that each row is to begin with the number shown and end with the number shown.

A 425 426 421 429 440 431 433 435

B 752 757 754 756 758 759 763 761 763

C 966 965 967 970 968 969 974 971 973

D 141 142 144 148 145 146 148 155 150

E 800 802 810 804 806 811 807 809 811

F 219 221 222 226 224 225 229 227

G 596 597 599 601 602 604 603 605

H 189 191 194 192 193 197 199 201

I 340 346 342 346 349 346 348 347

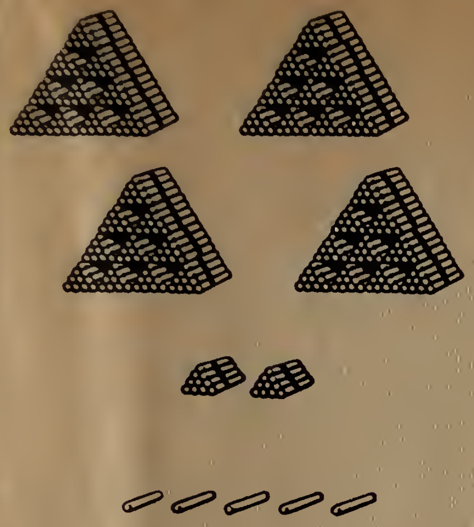
J 815 816 819 817 819 820 825 822

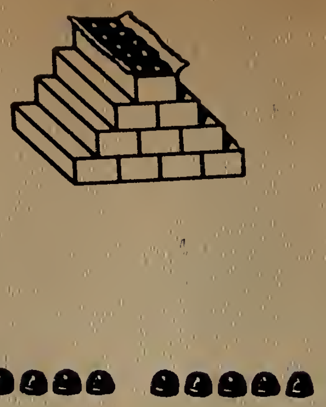
K 657 659 667 660 662 667 664 666

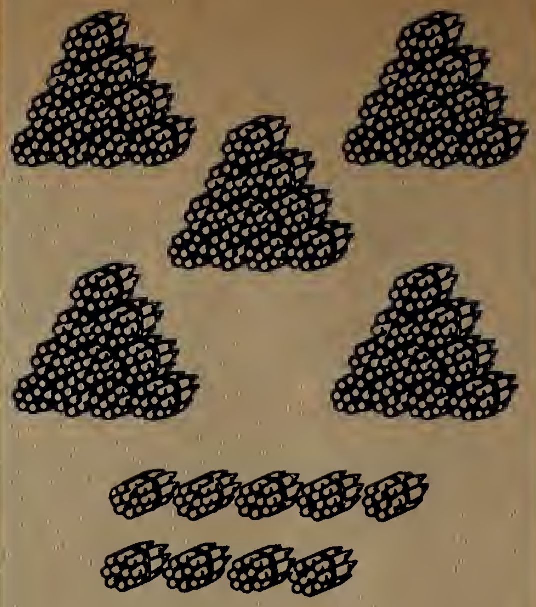
L 470 478 472 474 478 476 478 477

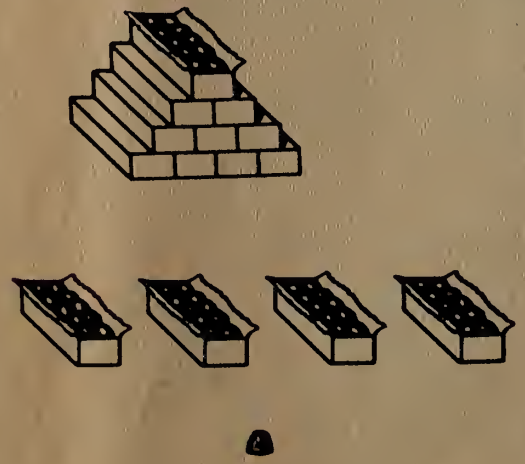
tion). You may adopt the directions for page 35 to this page. Tell the children to decide how many objects are in each picture and to write this number on the first brown answer line. Then they are to imagine the objects increased by 1, by 10, and by 100 and write these numbers

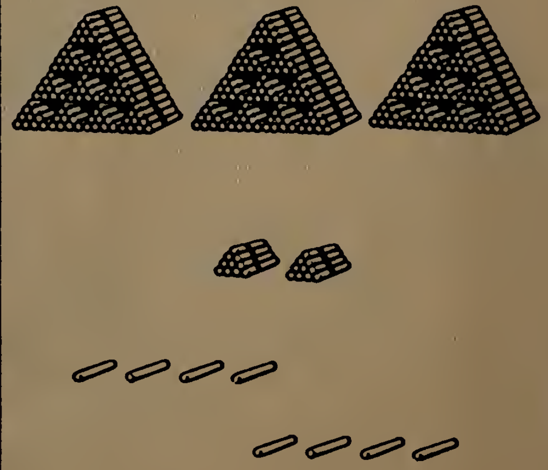
A to Q), point out the brown lines beside each number. The children are to write on the first line the number that means one more than the number shown, on the second line the number that means ten more, and on the third line the number that means one hundred more.



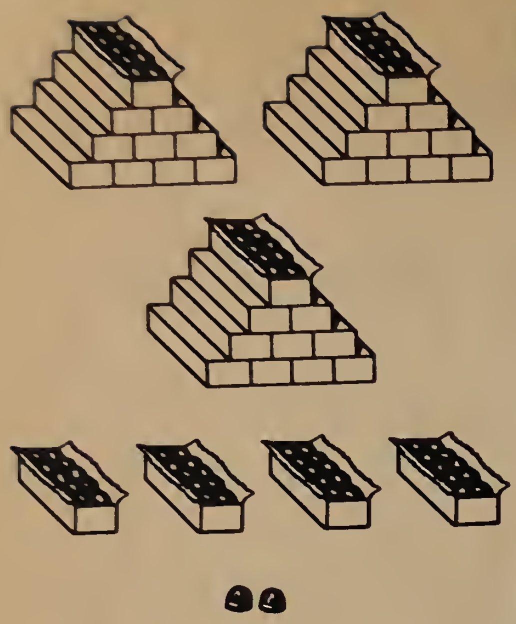






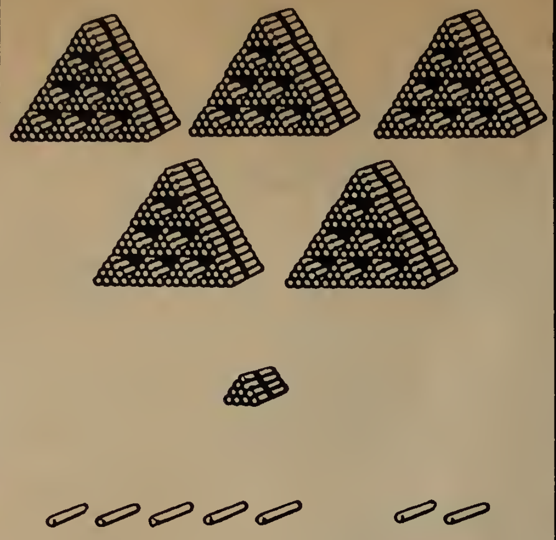


A 322 ____ ____ ____
B 189 ____ ____ ____
C 610 ____ ____ ____
D 559 ____ ____ ____
E 278 ____ ____ ____
F 701 ____ ____ ____
G 525 ____ ____ ____
H 400 ____ ____ ____
I 777 ____ ____ ____
J 639 ____ ____ ____
K 419 ____ ____ ____
L 145 ____ ____ ____
M 309 ____ ____ ____
N 832 ____ ____ ____
O 620 ____ ____ ____
P 301 ____ ____ ____
Q 299 ____ ____ ____



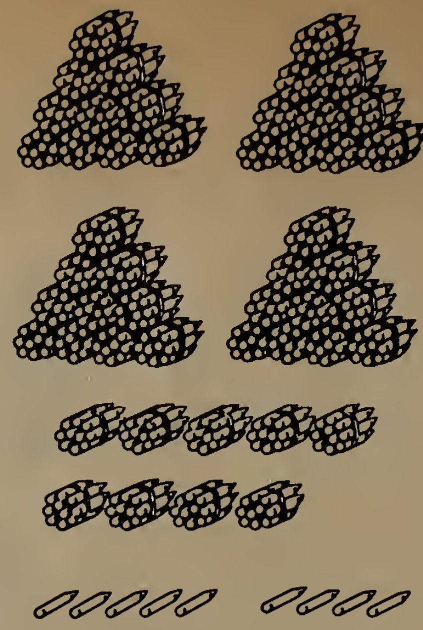
______ ______

______ ______



______ ______

______ ______

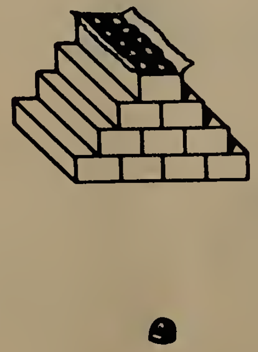


______ ______

______ ______

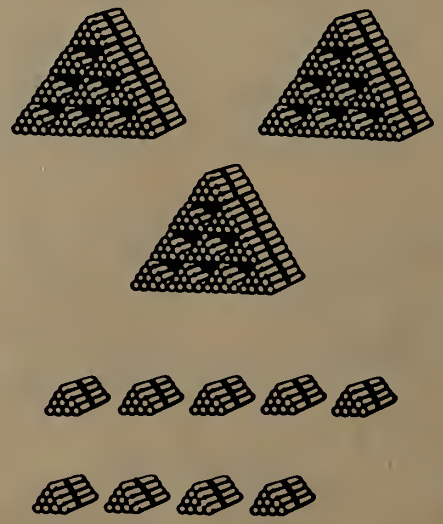
______ ______

______ ______



______ ______

______ ______



______ ______

______ ______

A 551 ______ ______ ______

B 300 ______ ______ ______

C 860 ______ ______ ______

D 537 ______ ______ ______

E 990 ______ ______ ______

F 215 ______ ______ ______

G 737 ______ ______ ______

H 829 ______ ______ ______

I 599 ______ ______ ______

J 630 ______ ______ ______

K 416 ______ ______ ______

L 401 ______ ______ ______

M 555 ______ ______ ______

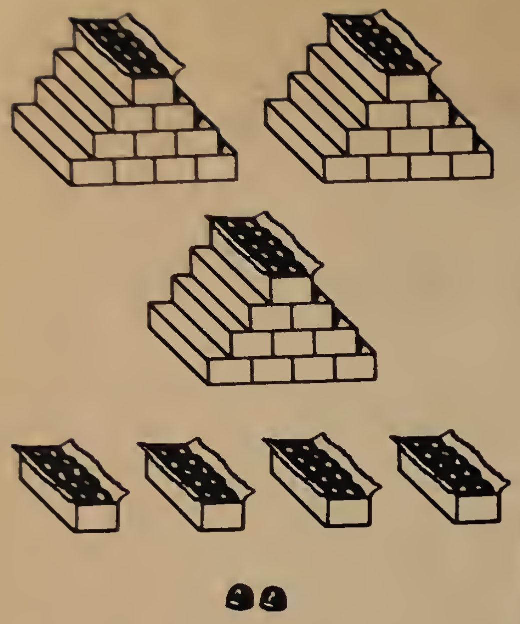
N 294 ______ ______ ______

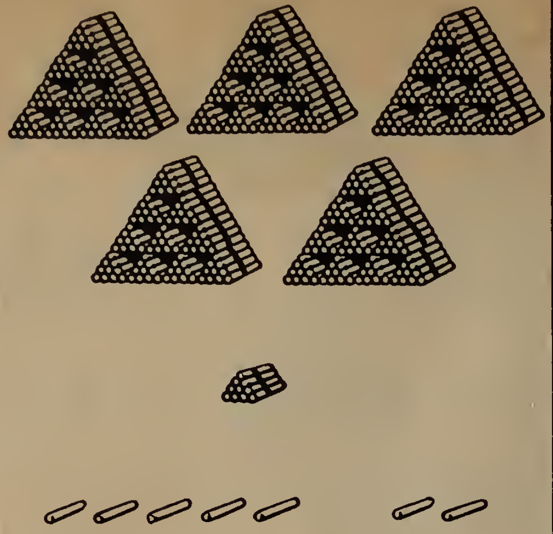
O 381 ______ ______ ______

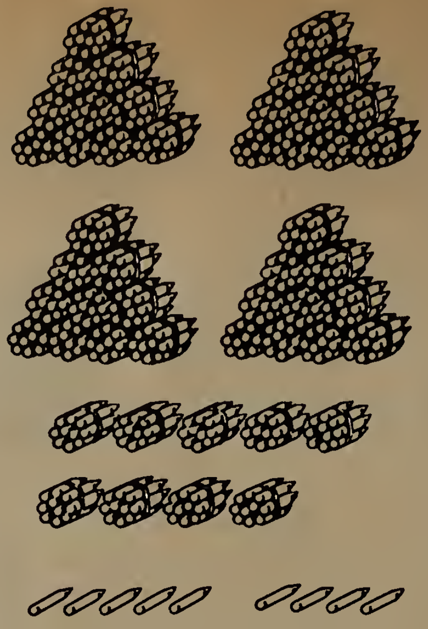
P 902 ______ ______ ______

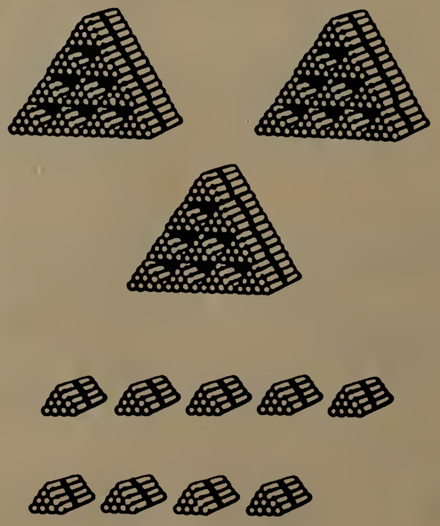
Q 207 ______ ______ ______

Decreasing Groups by 1, 10, and 100 (Page 96 Numbers in Action). The work on this page is similar to that on page 85. Here, however, after the children have decided how many objects are in a picture and have written the number on the first brown answer line, they are to imagine the number of objects **decreased** by 1, by 10, and [illegible] ture. For the practice at the right (brown letters A to Q), the children are to write on the first answer line the number that means one less than the number shown; on the second line the number that means ten less; and on the third line the number that means one hundred less.









A 551

B 300

C 860

D 537

E 990

F 215

G 737

H 829

I 599

J 630

K 416

L 401

M 555

N 294

O 381

P 902

Q 207

Decreasing Groups by 1, 10, and 100 ([illegible] Numbers in Action). The work on this page is similar to that on page 85. Here, however, after the children have decided how many objects are in a picture and have written the number on the first brown answer line, they are to imagine the number of objects **decreased** by 1, by 10, and [illegible] ture. For the practice at the right (brown letters A to Q), the children are to write on the first answer line the number that means one less than the number shown; on the second line the number that means ten less; and on the third line the number that means one hundred less.

■ Carol has ____ pennies in all.
She is taking ____ pennies away.
There will be ____ pennies left.

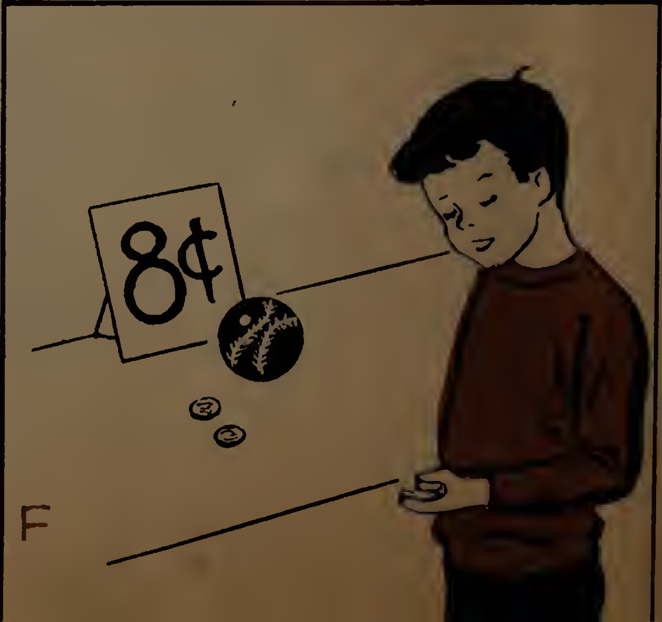
■ Tom has ____ pennies.
Each cookie costs ____ pennies.
Tom can buy ____ cookies.

■ The ball costs ____ pennies.
Don has ____ pennies on the table.
He needs ____ more pennies.

■ Don had ____ cents on the table.
Then he put ____ more cents on the table.
Now he has ____ cents on the table.

■ Nancy has ____ pennies in each group.
She has ____ groups of pennies.
She has ____ pennies in all.

■ Ellen is buying the toy umbrella.
She will have ____ pennies left.



Look at Picture A. How many pennies did Don have on the table at first? How many pennies is he putting on the table? How many pennies will he have in all? Now look at the problems in the middle of the page. Find the problem that tells about Don and his pennies and write

bers on the answer lines in the problem. For each of the other pictures first find the problem that tells about the picture. Write the letter of the picture in the brown answer square. Then write the correct numbers on the answer lines in the problem."

Counting Money by Fives (Page [illegible] *Numbers in Action*). Say: "Look at the coins and numbers in the picture at the top of the page. What do the coins with the number 5 on them mean? What do the coins with the number 1 on them mean? The pennies are arranged in groups of how many? Count all the coins in this picture by fives. Begin with the first nickel and draw a circle around the brown number 5. Which brown number will you draw a circle around when you count the next nickel? Why? Now finish counting the coins by fives and drawing circles around the correct brown numbers. Do the same things for each picture of coins on the page."

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27
28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27
28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27
28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50

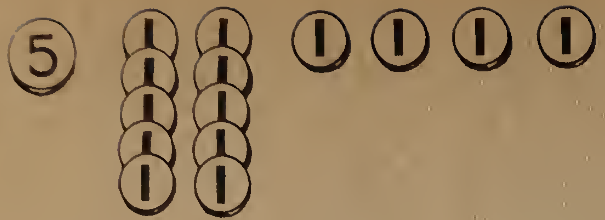
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27
28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27
28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27
28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27
28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50

[illegible] understand that the coins with 5 on them mean nickels and those with 1 mean pennies. Say: "Count the coins in the first picture by fives and ones. As you count, write each number you say on a brown line. (In this picture the children should write 5, 10, 15, [illegible] how much money there is in the picture. Be sure to write the cents' sign after the number. In each of the other pictures first write the numbers that show how you count the coins. Then write the amount of money that is shown in the picture."



____ ____ ____ ____

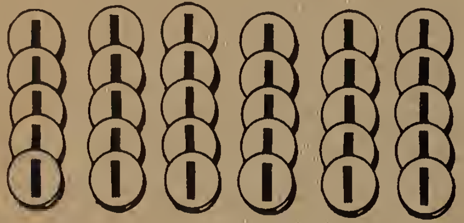
____ ____ ____

____ ____ ____ ____

____

____ ____ ____ ____

____ ____

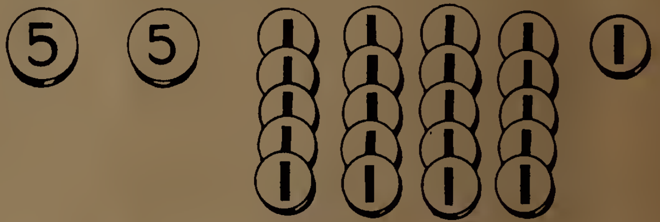


____ ____ ____ ____

____ ____

____ ____ ____ ____

____

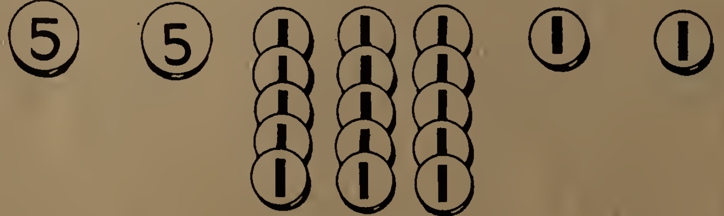


____ ____ ____ ____

____ ____ ____

____ ____ ____ ____

____



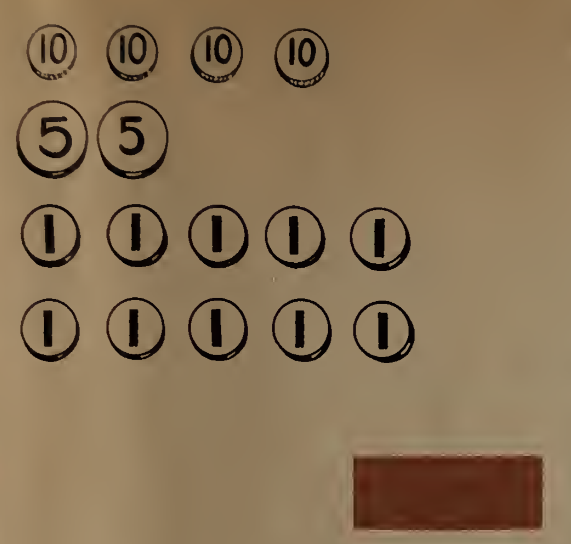
____ ____ ____ ____

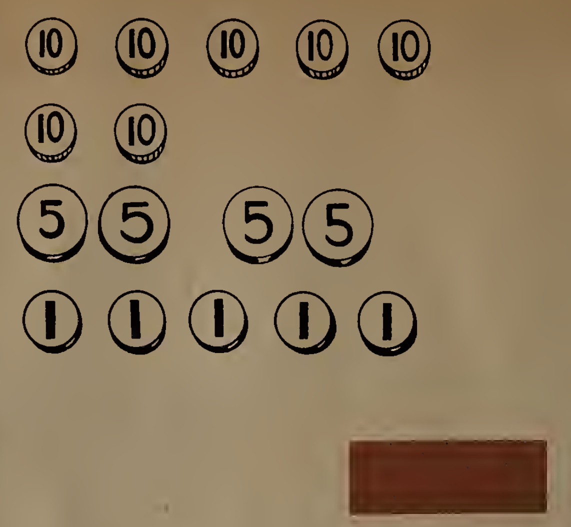
____ ____ ____

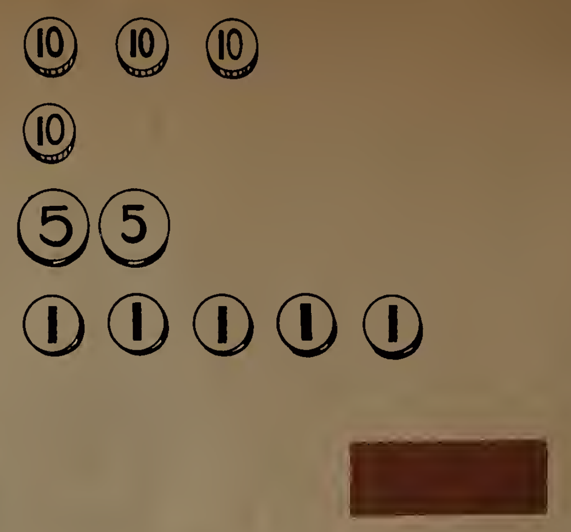
____ ____ ____ ____

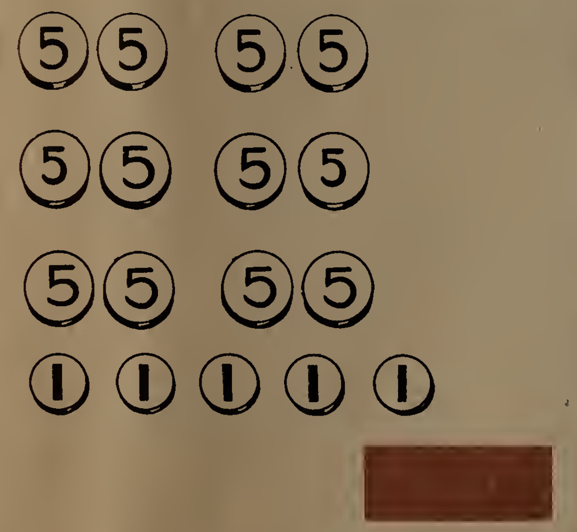
____ ____

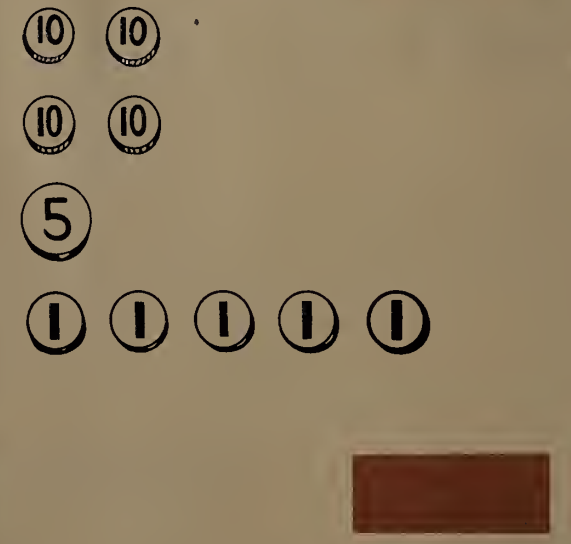
coins are in the first picture? [Dimes, nickels, pennies] Begin with the dimes and count the coins by tens, fives, and ones. Write in the brown answer strip the number that tells how much money is in the picture. Be sure to write the cents' sign where it belongs. Now find a group of around these coins. If there are more groups of coins like this, draw a circle around each group. For each of the other pictures first write the amount of money shown in the picture and then draw a circle around each group of coins that will buy as much as a quarter."

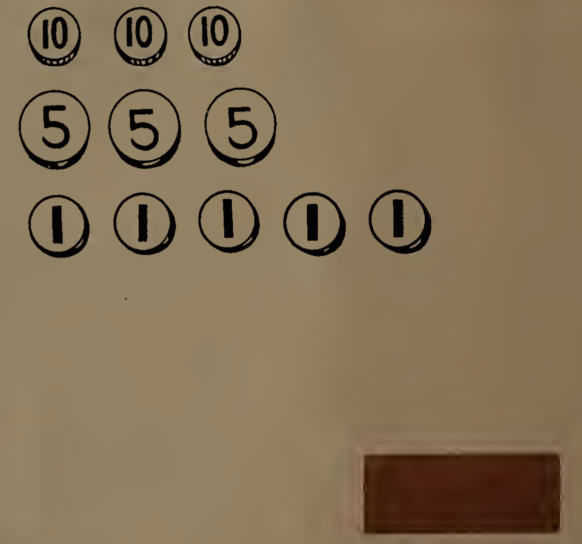


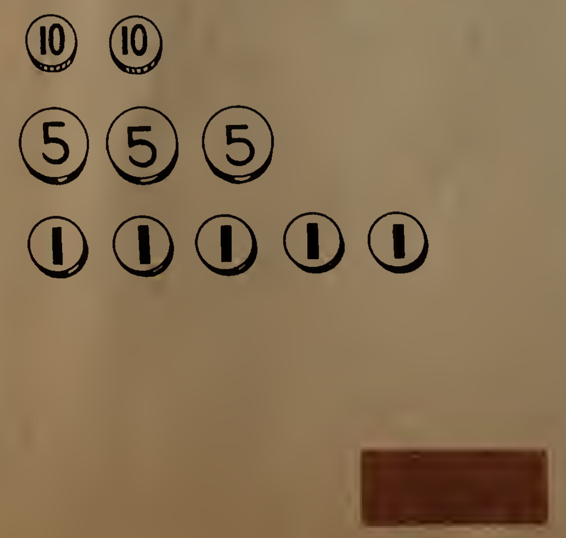


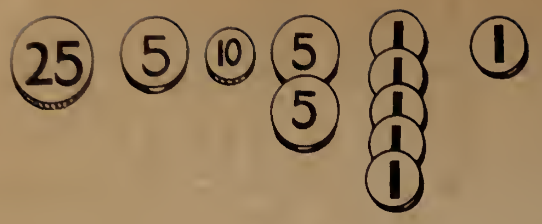


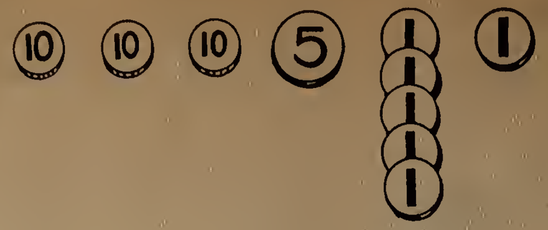


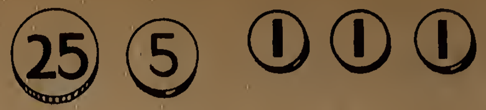


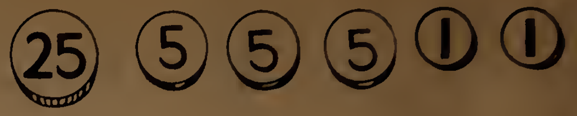


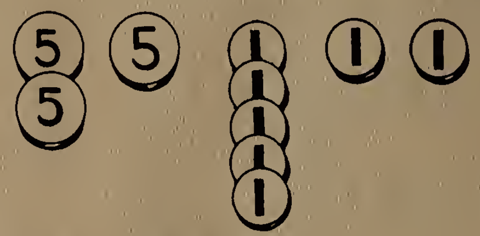


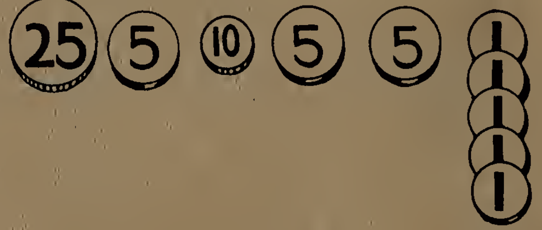












Counting Money by Tens, Fives, and Ones (Page 10[illegible] **Numbers in Action**) Adapt the directions for page 90 to this page. The children are to count the coins and write the numbers used in counting on the brown response lines. (For the first picture they should count and write "25, 30, 40, 50, 55, 56." The work will be easier if they cross off each coin or group of coins as it is counted.) Have the children write the amount represented by the coins in the brown answer strip. Remind them to use the cents' sign.

"Pretend that you are going to buy the doll cradle in the first picture. How much does it cost? Beside the cradle are two pictures of coins [point to them]. If you had the coins in the top picture, could you buy the cradle? Draw a circle around the coins that make just enough

buy the cradle? Draw a circle around the coins in this picture that make just enough money to buy it. Do the same things for each of the other toys on this page. If there is not enough money in a picture to buy the toy, cross off all the coins in the picture."

34¢

25 5 5 5 10
1 1 1 1 1 1 1

10 10 10 10 5
1 1 1 1 1

78¢

25 5 10 10 10 10
5 5 5 5 1 1 1 1

10 10 10 10 10 10 10 10
5 5 5 5 5 1 1 1 1 1

27¢

10 5 5 5 5 5 5
1 1 1 1

25 5 5 5
1 1 1 1 1 1 1

99¢

25 5 5 5 5 5
10 10 10 10 10 10 1 1 1 1 1

25 5 10 10 1 1 1 1
5 10 10 10 1 1 1 1 1

42¢

5 5 5 5 5 5 5 5
5 5 5 5 1 1 1 1 1

25 5 5 5 1 1 1 1
10 10 10 1 1 1 1

61¢

25 5 5 5 5 5
10 10 10 10 1 1 1 1

10 10 10 10 10
5 5 5 5 5 1 1

55¢

25 5 5 5 10 10
1 1 1 1 1 1 1 1 1 1

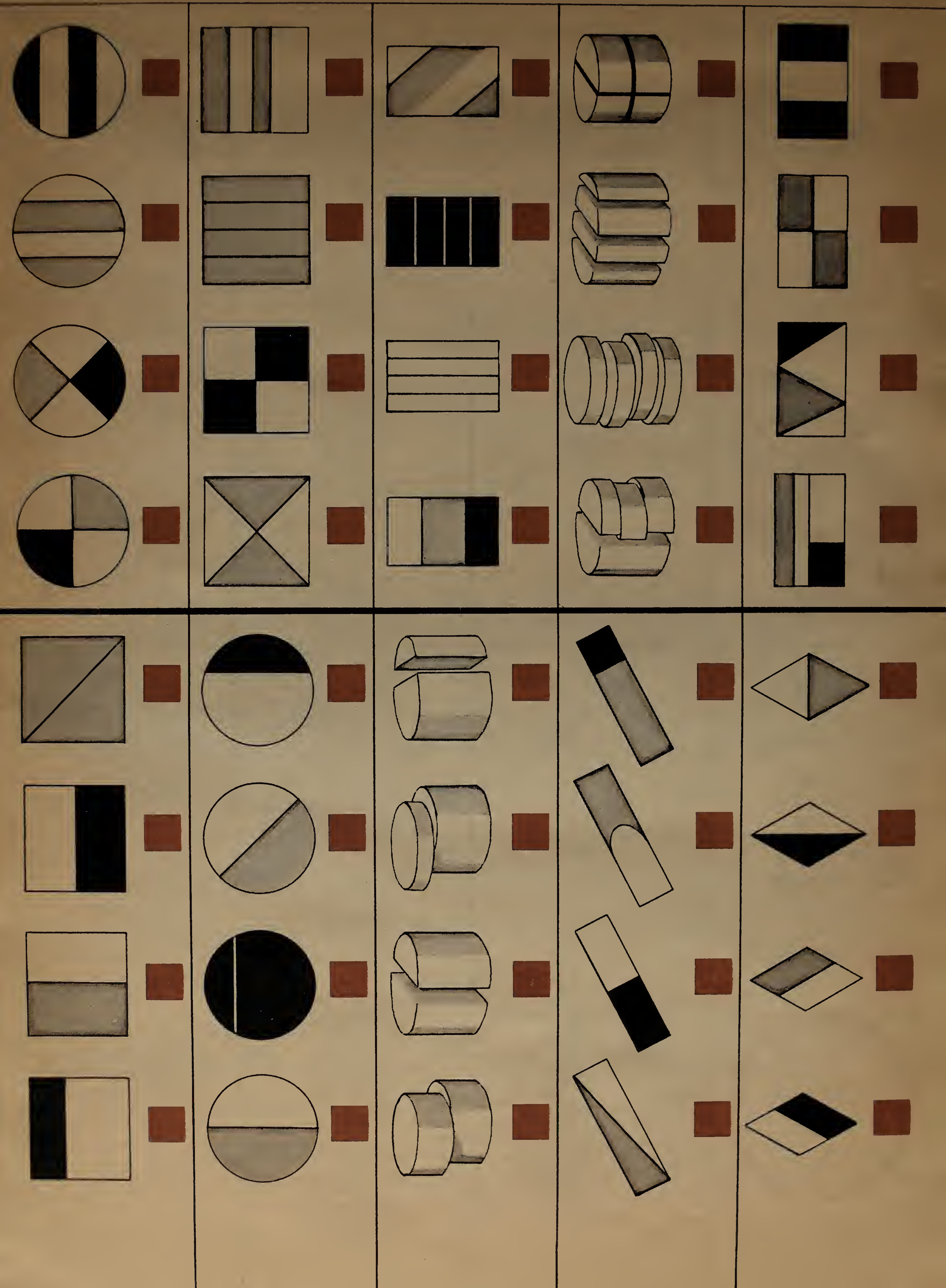
10 10 10 10 5 5 5
1 1 1 1 1 1 1 1 1 1

86¢

10 10 10 10 10 10 10
5 5 5 5 1 1 1 1 1 1

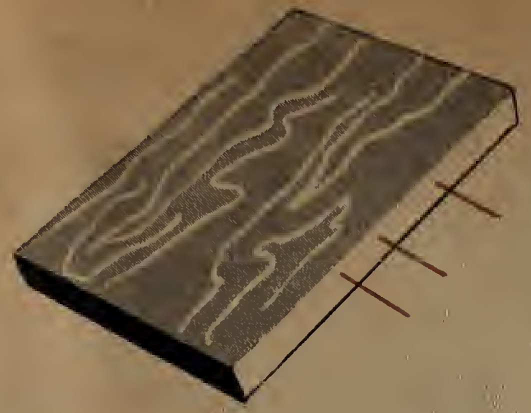
25 5 5 5 5 5
10 10 10 10 10 1 1 1 1 1

Say: "Look at the first picture at the left of the heavy line (point to it). If half of the first square is black, put this mark, X, in the brown answer square. If it is not, put this mark, ≋, (scribble), in the answer square. Each object on this side of the heavy line is divided into two square. For each one that does not show halves, put this mark, ≋ (scribble), in the answer square.'' When the children have finished, have them use the same response symbols to indicate whether or not each object at the right of the heavy line is divided into fourths.



Practice with Halves (Page 105 **Numbers in Action**). Say: "Look at the board in the first picture and at the three little brown lines beside it. Pretend you are going to cut this board in half. Does one of these lines show where to cut? Finish drawing the line across the board.

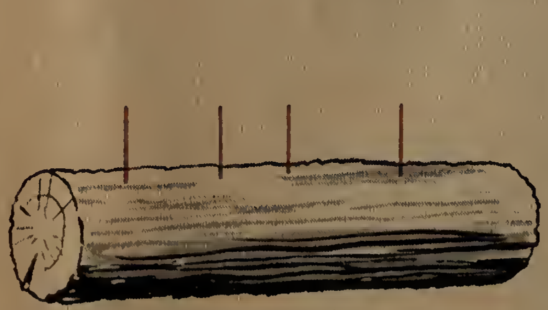
Now for each of the other pictures decide if one of the little brown lines shows where you can cut the object in half. If it does, finish drawing the line across the picture. If you can't tell where to draw the line, cross off the whole picture."

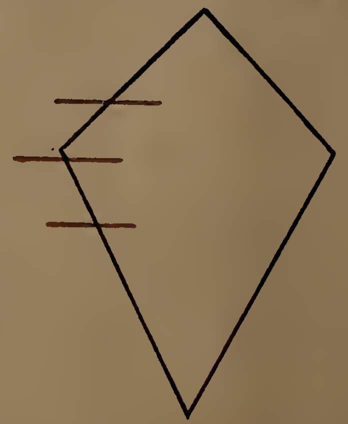




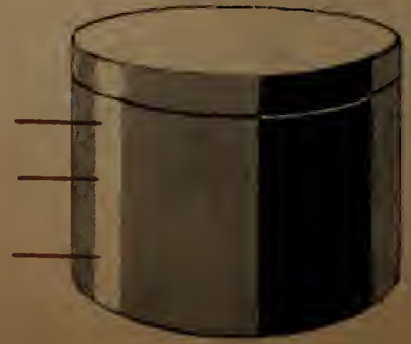








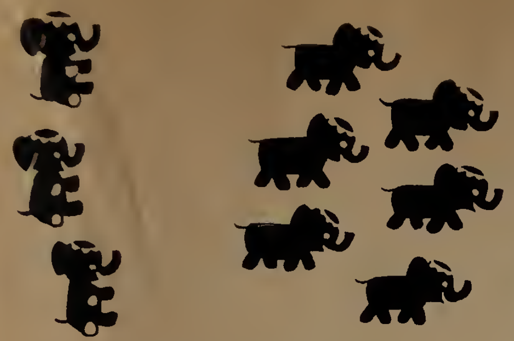





[illegible] attention to the picture with the brown background. Say, "How many clowns are there in this picture? Look at the picture at the right (point to it). When all the clowns in this picture are together in one group, will there be just as many clowns as there are in the

in the brown answer square. If there will not be just as many clowns, put this mark, ≷ (scribble), in the answer square. For each picture decide whether or not there will be just as many clowns as there are in the brown picture and put the correct mark in the answer square."

The 9 Group: Separating into Two Groups; Comparing (Page 107 **Numbers in Action**). Adapt the directions for page 65 to this page. The children look at each picture above the heavy black line and decide how many elephants will be left and write the number on the blue answer line. In each picture below the heavy line the smaller group is printed in blue. The children cross off, in the larger group, as many objects as there are in the smaller group. They then write the correct numbers on the answer lines.



___ elephants left

___ elephants left

___ elephants left

___ elephants left

___ elephants left

___ elephants left

___ elephants left

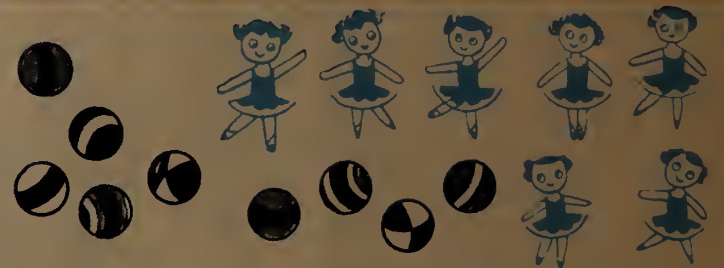
___ elephant left

Subtract ___ bears.

___ more bears than wagons

Subtract ___ stands.

___ more stands than dogs

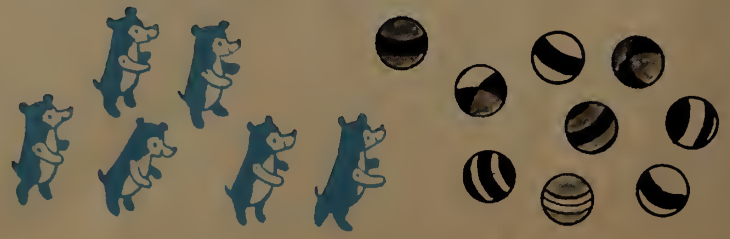


Subtract ___ balls.

___ more balls than dolls

Subtract ___ stands.

___ more stands than elephants



Subtract ___ balls.

___ more balls than bears

Subtract ___ elephants.

___ more elephants than wagons

____ more dogs than stands

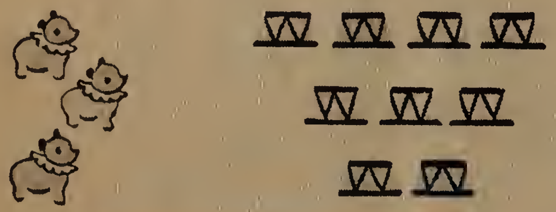
____ dogs left

____ horses in all

____ more balls than stands

____ elephants in all

____ bears in all



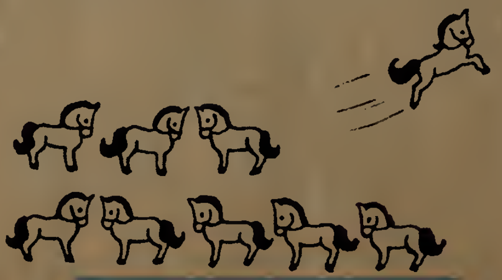
____ more stands than bears

____ dogs in all

____ elephants left

____ dogs in all

____ bears in all



____ horses left

A 9−8= ____
B 6−2= ____
C 4+4= ____
D 6+2= ____
E 9−6= ____
F 2+6= ____
G 9−7= ____
H 3+4= ____
I 7−2= ____
J 9−1= ____
K 3+6= ____
L 1+7= ____
M 8−5= ____
N 4+5= ____
O 6−1= ____
P 9−4= ____
Q 1+8= ____

A 3−1= ____
B 7+2= ____
C 9−5= ____
D 5+4= ____
E 9−3= ____
F 7−6= ____
G 5+3= ____
H 4−1= ____
I 8−7= ____
J 8+1= ____
K 8−4= ____
L 2+7= ____
M 9−2= ____
N 2−1= ____
O 8−6= ____
P 6+3= ____
Q 8−1= ____

[illegible] of Addition and Subtraction Basic Facts [illegible] **Numbers in Action!** Say: "Read the problem in the first picture and look at the picture. In the blue answer strip write the numbers that you use to find how many more dogs there are than stands. (The children should write 9 − 5 = 4.) Now read the problem again [illegible] first read the problem. Then write, in the answer strip, the numbers you need to use. After that, write the answer." For the problems with the blue and the gray letters (A to Q) have the children read each one silently and write its answer on the answer line.

The 9 Group: How Many More Are Needed (Page 109 Numbers in Action). Adapt the directions for page 59 to this page. Have the children read the problems in the first picture and write the correct numbers on the answer lines. They then should use the picture of objects at the right to find the answers for the two problems in the second picture. They should cross off objects (or coins in some pictures) to find how many more are needed to fill the container or to buy a given article. Answers should be written on the answer lines.

The box needs ____ dogs in all.

There are ____ dogs.

9 dogs – ____ dogs = ____ dogs

____ more dogs are needed.

The elephant costs ____ pennies.

There are ____ pennies.

9 pennies – ____ pennies –

____ pennies

____ more pennies are needed.

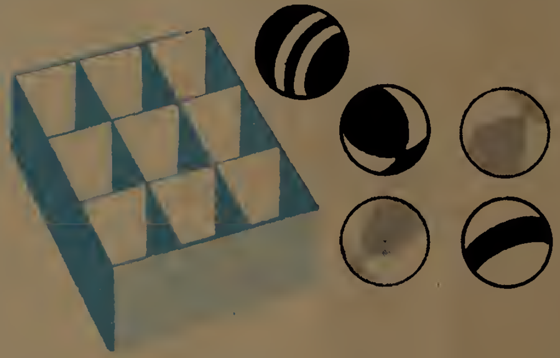
The box needs ____ stands in all.

There are ____ stands.

9 stands – ____ stands =

____ stands

____ more stands are needed.

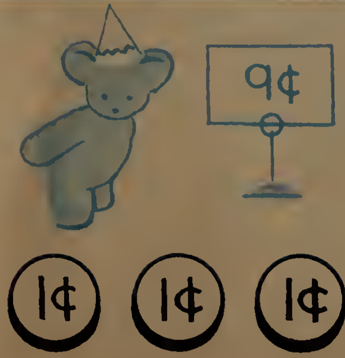


The box needs ____ balls in all.

There are ____ balls.

9 balls – ____ balls = ____ balls

____ more balls are needed.



The bear costs ____ pennies.

There are ____ pennies.

9 pennies – ____ pennies =

____ pennies

____ more pennies are needed.

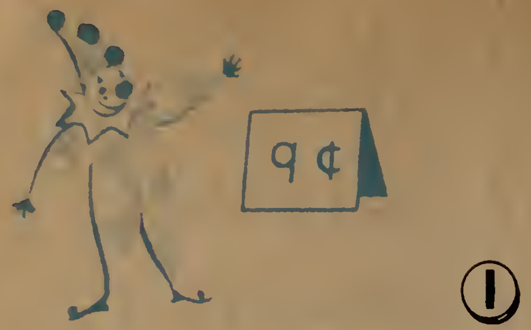
The horse costs ____ pennies.

There are ____ pennies.

9 pennies – ____ pennies –

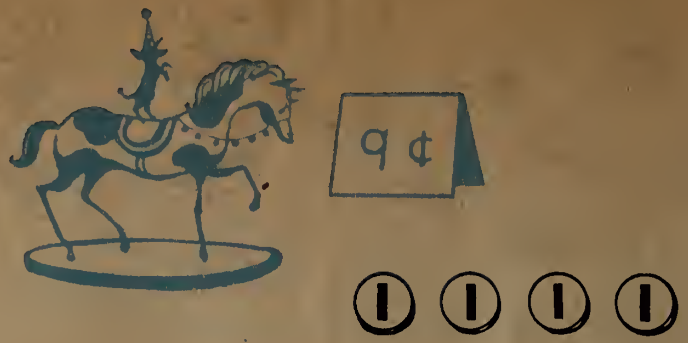
____ pennies

____ more pennies are needed.



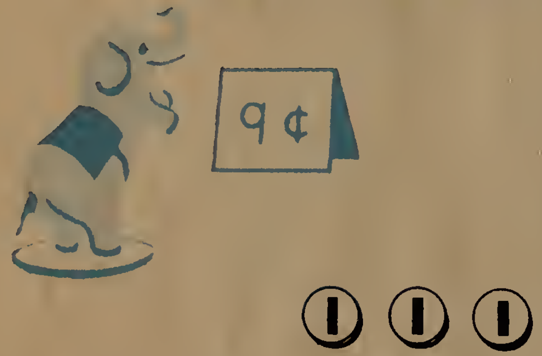
____¢ – ____¢ = ____¢

____ more cents are needed.



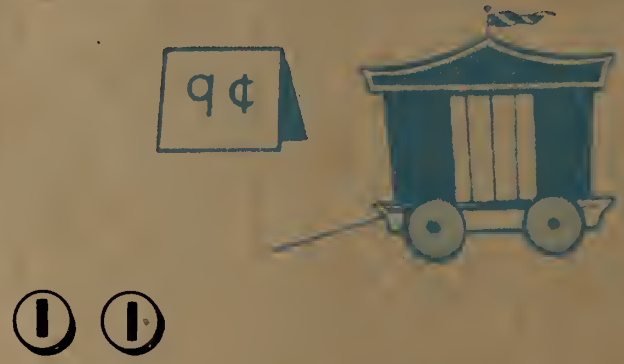
____¢ – ____¢ = ____¢

____ more cents are needed.



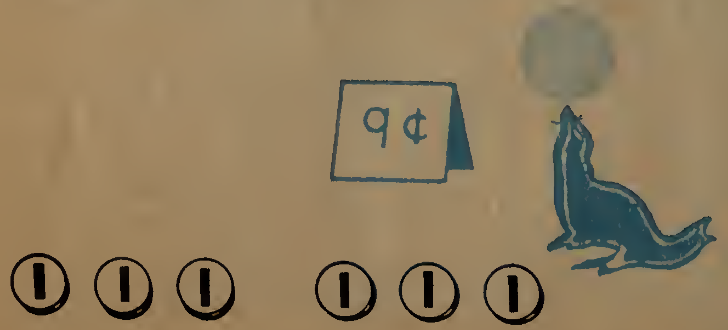
____¢ – ____¢ = ____¢

____ more cents are needed.



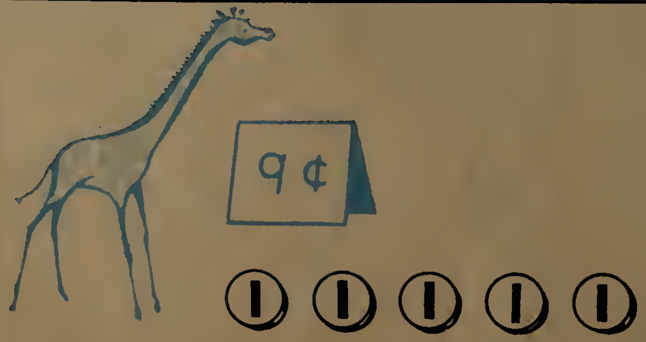
____¢ – ____¢ = ____¢

____ more cents are needed.



____¢ – ____¢ = ____¢

____ more cents are needed.



____¢ – ____¢ = ____¢

____ more cents are needed.

A 4=2+▬ ____________

B 9=1+▬ ____________

C 7=4+▬ ____________

D 9=6+▬ ____________

E 8=2+▬ ____________

F 9=4+▬ ____________

G 9=8+▬ ____________

H 4=1+▬ ____________

I 9=2+▬ ____________

J 2=1+▬ ____________

K 6=3+▬ ____________

L 9=5+▬ ____________

M 3=2+▬ ____________

N 9=3+▬ ____________

O 4=3+▬ ____________

P 9=7+▬ ____________

Q 5=4+▬ ____________

[illegible] directions for page 61 to this page. Have the children pretend that they are going to buy each toy and that they have the cents shown in each picture. They are to fill in the answer lines in the first problem in the picture, write the basic fact in the blue the number that shows how many more pennies they will need. For each blue lettered problem at the right (A to Q), tell the children to write the numbers that tell how to find the number that belongs where the screen (▬) is. For Problem A they will write "4 — 2 = 2."

The 9 Group: Equal Groups; Combining and Separating (Page 111 **Numbers in Action**). Say: "Read the first problem printed in blue in the first picture. What number should you write on the answer line? Read the next problem. Make the groups by drawing rings around the balls. What number should you write on the answer line in the third problem.' Now write the answer for the last problem. last three pictures the children are to make as many equal groups as there are blue dots. They then should read the problems and write the answers. Have the children read each of the blue-lettered problems (A to Q) silently and write the answer on the answer line.

____ balls in all

Put 3 balls in each group.

____ groups of 3 balls

9=____ threes

____ stands in all

Put 4 stands in each group.

____ groups of 4 stands

8=____ fours

____ groups of clowns

____ clowns in each group

____ clowns in all

3 threes=____

____ groups of clowns

____ clowns in each group

____ clowns in all

2 fours=____

____ groups of balls

____ balls in each group

____ balls in all

4 twos=____

____ dogs in all

Put 2 dogs in each group.

____ groups of 2 dogs

6=____ twos

____ dogs in all

Make ____ equal groups.

____ dogs in each group

6=2 groups of ____

____ bears in all

Make ____ equal groups.

____ bears in each group

9=3 groups of ____

____ stands in all

Make ____ equal groups.

____ stands in each group

8=4 groups of ____

A 3 threes= ____

B 6=3 groups of ____

C 2 fours= ____

D 9= ____ threes

E 8=4 groups of ____

F 2 threes= ____

G 8=2 groups of ____

H 6= ____ twos

I 6=2 groups of ____

J 4=2 groups of ____

K 8= ____ twos

L 2 twos= ____

M 9=3 groups of ____

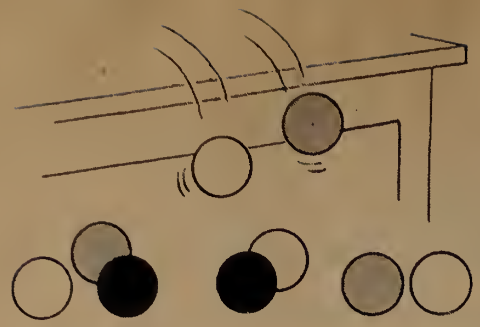
N 8= ____ fours

O 3 twos= ____

P 4= ____ twos

Q 6= ____ threes

Pictured Problem Situations for the 9 Group (Page 117 **Numbers in Action**). Adapt the directions for page 72 to this page. Get the children to notice that some of these pictures show joining action, while others show separating action. For each picture have the children cross off the word printed in blue (**plus** or **minus**) that does not belong with the action shown. They then should write, in the blue answer strip, the basic addition or subtraction fact that belongs with the picture. (They should write "7 + 2 = 9" for the first picture.)


plus
minus


plus
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Review of Basic Facts (Page 113 **Numbers in Action**). Use directions similar to those provided for page 63. Give separate directions for each column of problems, identifying them by their colored letters, blue, gray, and black. Remember that in the column of problems with black letters the children are to write the basic fact for each problem on the blue answer line following the problem.

A 5 plants plus 2 plants are ____ plants.
B 1 box plus 8 boxes is ____ boxes.
C 9 cows minus 4 cows are ____ cows.
D 5 ducks minus 2 ducks are ____ ducks.
E 9 birds minus 1 bird are ____ birds.
F 2 dogs plus 7 dogs are ____ dogs.
G 4 dolls plus 4 dolls are ____ dolls.
H 5 cents plus 4 cents are ____ cents.
I 9 plants minus 5 plants are ____ plants.
J 8 pigs minus 3 pigs are ____ pigs.
K 4 boats plus 5 boats are ____ boats.
L 7 balls minus 1 ball are ____ balls.
M 9 toys minus 7 toys are ____ toys.
N 7 cents plus 2 cents are ____ cents.
O 9 cars minus 8 cars are ____ car.
P 2 girls plus 2 girls are ____ girls.
Q 6 books plus 3 books are ____ books.

A $9-7=$ ____
B $9-3=$ ____
C $3+5=$ ____
D $9-2=$ ____
E $3+6=$ ____
F $8-6=$ ____
G $3+4=$ ____
H $7+2=$ ____
I $5-2=$ ____
J $6-3=$ ____
K $8+1=$ ____
L $4+5=$ ____
M $8-3=$ ____
N $7-6=$ ____
O $2+7=$ ____
P $2+3=$ ____
Q $1+6=$ ____

A Subtract 4 from 9. ____
B Add 6 and 2. ____
C Add 4 and 3. ____
D Subtract 8 from 9. ____
E Add 1 and 8. ____
F Subtract 3 from 6. ____
G Add 2 and 4. ____
H Subtract 3 from 8. ____
I Add 4 and 4. ____
J Subtract 5 from 8. ____
K Add 2 and 7. ____
L Subtract 6 from 9. ____
M Subtract 2 from 4. ____
N Subtract 3 from 9. ____
O Add 3 and 5. ____
P Add 1 and 7. ____
Q Subtract 6 from 8. ____


A


B


C


D

A How many bears will there be in all?

____ bears plus minus ____ bears = ____ bears

B How many balls will there be in all?

____ balls plus minus ____ balls = ____ balls

C How many more clowns are there than dogs?

____ clowns plus minus ____ clowns = ____ clowns

D How many more elephants are there than stands?

____ elephants plus minus ____ elephants =
____ elephants

E How many dolls will be left?

____ dolls plus minus ____ dolls = ____ dolls

F How many more horses are there than dolls?

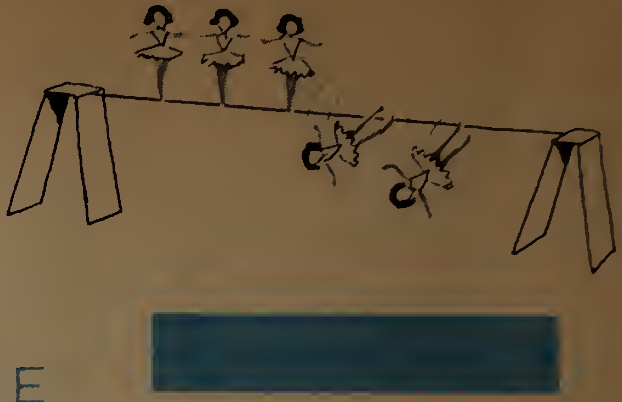
____ horses plus minus ____ horses = ____ horses

G How many dogs will there be in all?

____ dogs plus minus ____ dogs = ____ dogs

H How many clowns will there be in all?

____ clowns plus minus ____ clowns = ____ clowns


E


F


G


H

Pictorial Problem Situations (Page 111 Numbers in Action) Say: Read Problem A to yourselves. Then look at Picture A. Go back to Problem A and decide which of the two words, **plus** or **minus**, belongs with the problem. Cross out the word that does not belong. Now write the correct numbers on the answer lines. On the blue answer strip in Picture A write the numbers that show how to find the answer for Problem A. [The children should write the basic fact 2 + 6 = 8.] Do the same things for the other problems and pictures."

Pictorial Problems (page 115 Numbers in Action). Have the children read all of Problem A and look at Picture A, with which it belongs. Say: "If you wanted to buy the two dolls, how much money would you need? Write this amount on the first answer line in Problem A. The money that Nancy has is shown in Picture A. Write how many cents she has on the correct answer line in Problem A. Now decide how many more cents she needs to buy the two dolls and write this amount on the correct answer line in Problem A. For each of the other problems, first read it and then use the picture that belongs with it to find the correct numbers to write on the answer lines in the problem."

A The two dolls cost ____¢ in all.
Nancy has ____¢. She needs ____¢ more
to buy the two dolls.

B The two cars cost ____¢ in all.
Don has ____¢. He needs ____¢ more
to buy the two cars.

C The two wagons cost ____¢ in all.
Tom has ____¢. He needs ____¢ more.

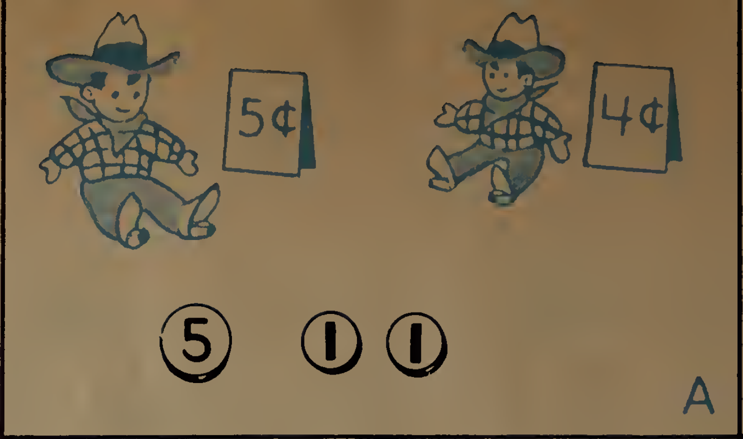
D The two balls cost ____¢ in all.
Carol has ____¢. She needs ____¢ more.

E The money in Picture E equals ____¢.

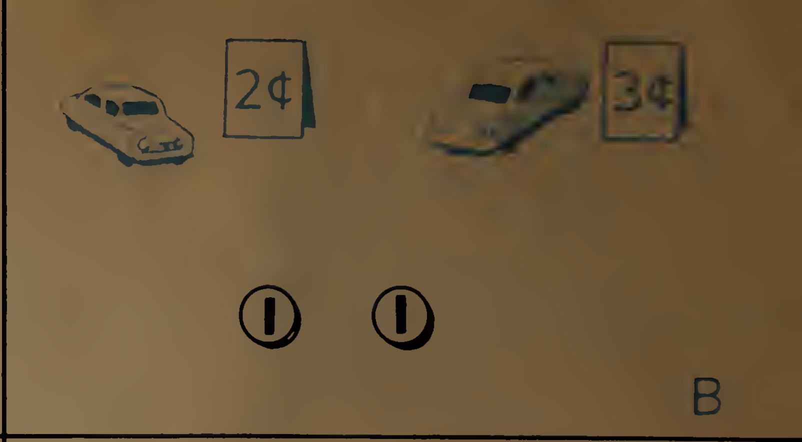
F The money in Picture F equals ____¢.

G Picture G has ____ pint bottles.
You can put ____ quarts of milk
into the bottles in Picture G.

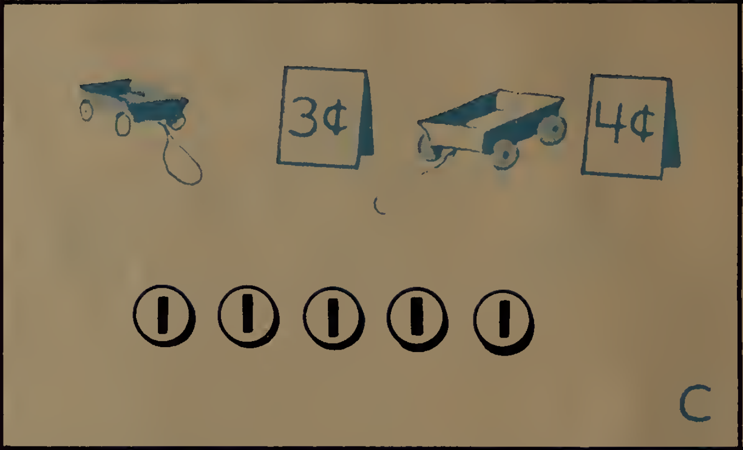
H Picture H has ____ quart bottles.
You can put ____ pints of milk
into the bottles in Picture H.



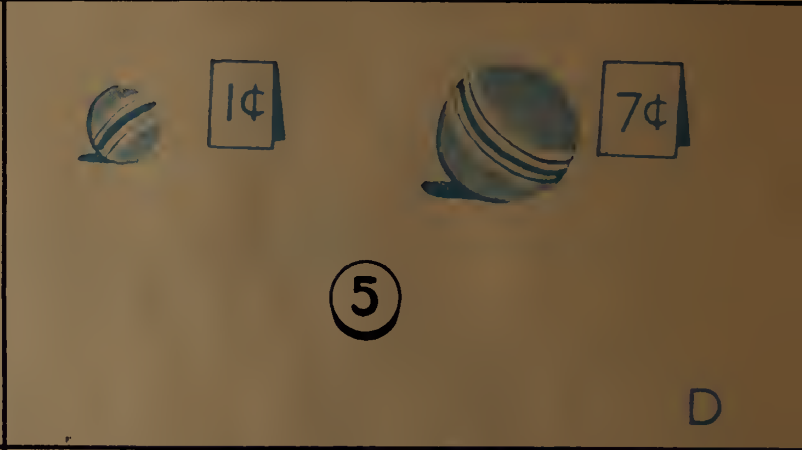
A



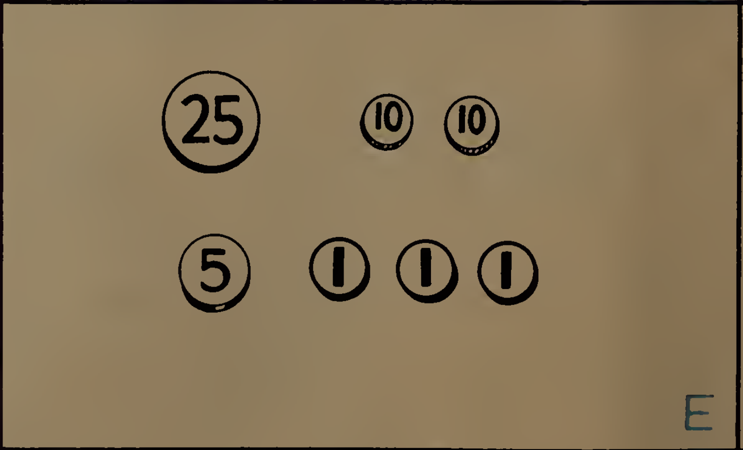
B



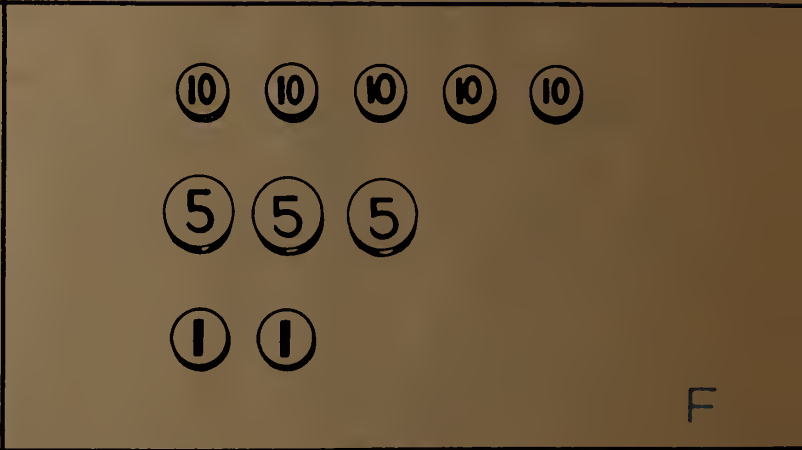
C



D



E



F


G


H

Action: Direct attention to the picture with the blue background. Say "How many bulbs are on the ground in this picture? Look at the next picture at the right (point to it). When all the bulbs in this picture are on the ground will there be as many bulbs as there are in the blue picture? If there will be as many bulbs, put this mark, /, in the answer square. If there will not be as many bulbs, put this mark, ≷ (scribble), in the answer square. For each of the other pictures decide whether or not there will be as many bulbs as there are in the blue picture and put the correct mark in the answer square."

The 10 Group: Separating into Two Groups (Page 117 **Numbers in Action**). Adapt the directions for the first exercise on page 65 to this page. Direct the children to look at the first picture and decide how many flowers there are in all, how many are being taken away, and how many will be left. They then write the correct number on the blue answer line in the picture. Have them follow the same procedure with the other pictures on the page.

_____ flowers left

_____ flowers left

_____ flower left

_____ flowers left

_____ flowers left

_____ flowers left

_____ flowers left

_____ flowers left

_____ flowers left

_____ flower left

_____ flowers left

_____ flowers left

_____ flowers left

_____ flowers left

_____ flowers left

_____ flowers left

_____ flowers left

_____ flowers left

_____ flowers left

_____ flowers left

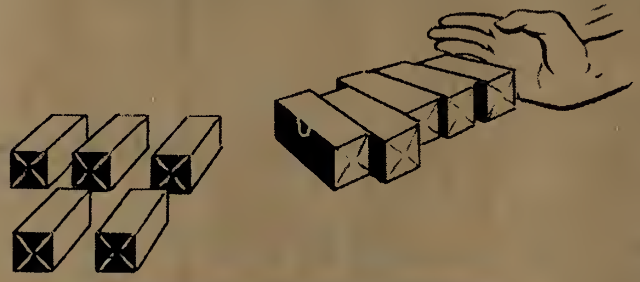
___ boxes will be left.

___ flowers in all

___ more plants than boxes

___ flowers will be left.

___ plants in all



___ boxes in all

___ boxes in all

___ baskets will be left.

___ more baskets than flowers

___ plants in all

___ plants will be left.

___ more baskets than flowers

A 8+2= ___

B 4−2= ___

C 10−4= ___

D 1+9= ___

E 6+3= ___

F 7−4= ___

G 7+3= ___

H 8−6= ___

I 3+1= ___

J 10−8= ___

K 4−3= ___

L 10−6= ___

M 3+7= ___

N 8−5= ___

O 10−5= ___

P 2+8= ___

Q 6−3= ___

A 10−9= ___

B 6−5= ___

C 1+3= ___

D 7+2= ___

E 10−2= ___

F 3+5= ___

G 4+6= ___

H 10−3= ___

I 5+5= ___

J 5−2= ___

K 10−7= ___

L 5+4= ___

M 8−4= ___

N 9+1= ___

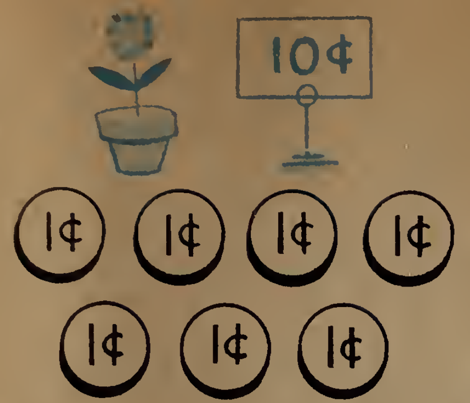
O 5−4= ___

P 6+4= ___

Q 10−1= ___

Numbers in Action) say: Read the problem in the first picture. Look at the picture. In the blue answer strip write the numbers that you use to find how many boxes will be left. [The children should write 10 − 1 = 9.] Now read the problem again and read the problem. Then write, in the answer strip, the numbers you need to use. After that, write the answer to the problem you read. For the problems with the blue and the gray letters (A to Q) have the children read each one and write the answer on the answer line.

The 10 Group: How Many More Are Needed (Page 119 Numbers in Action). Adapt the directions for page 59 to this page. Have the children read the problems in the first picture and write the correct numbers on the answer lines. They then should use the picture of coins at the right to find the answers for the two problems in the second picture. They should cross off coins (or objects in some pictures) to find how many more are needed to buy the plant or to fill the containers shown. Answers should be written on the answer lines.



The flower costs ____ pennies.

There are ____ pennies.

10 pennies – ____ pennies =

____ pennies

____ more pennies are needed.

____ flowers in all are needed.

There are ____ flowers.

10 flowers – ____ flowers =

____ flowers

____ more flowers are needed.

____ boxes in all are needed.

There are ____ boxes.

10 boxes – ____ boxes =

____ boxes

____ more boxes are needed.

The plant costs ____ pennies.

There are ____ pennies.

10 pennies – ____ pennies =

____ pennies

____ more pennies are needed.

The flower costs ____ pennies.

There are ____ pennies.

10 pennies – ____ pennies =

____ pennies

____ more pennies are needed.

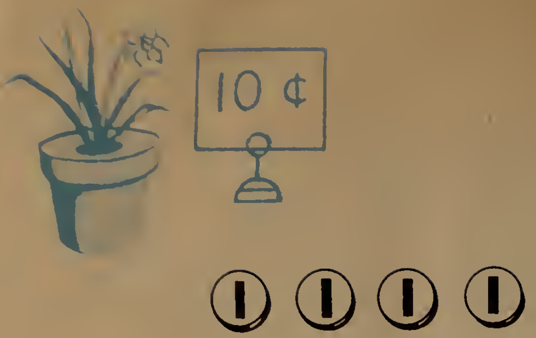
The plant costs ____ pennies.

There are ____ pennies.

10 pennies – ____ pennies =

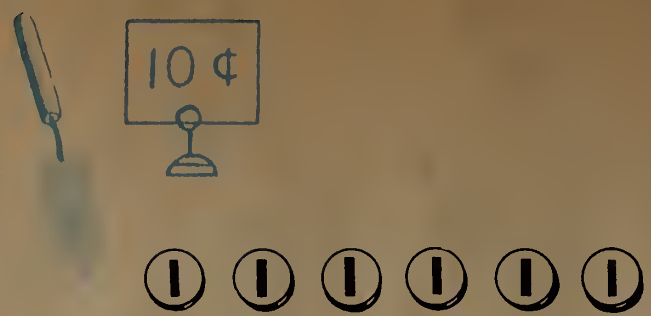
____ pennies

____ more pennies are needed.



___¢ − ___¢ = ___¢

___ more cents are needed.

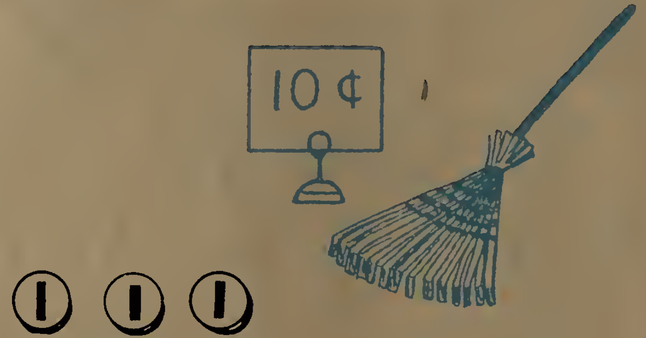


___¢ − ___¢ = ___¢

___ more cents are needed.

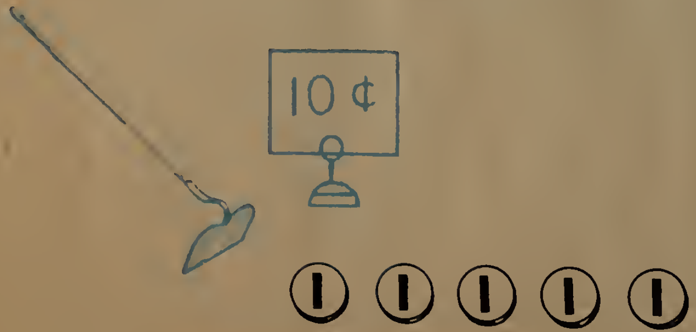
___¢ − ___¢ = ___¢

___ more cents are needed.



___¢ − ___¢ = ___¢

___ more cents are needed.



___¢ − ___¢ = ___¢

___ more cents are needed.

___¢ − ___¢ = ___¢

___ more cents are needed.

A 10=6+▨ ______

B 8=4+▨ ______

C 10=2+▨ ______

D 9=3+▨ ______

E 10=5+▨ ______

F 7=6+▨ ______

G 10=7+▨ ______

H 5=3+▨ ______

I 10=1+▨ ______

J 6=3+▨ ______

K 10=4+▨ ______

L 10=8+▨ ______

M 9=6+▨ ______

N 4=2+▨ ______

O 10=3+▨ ______

P 3=1+▨ ______

Q 10=9+▨ ______

[illegible] page 61 to this page. The children first write the correct numbers on the answer lines in the first problem in a picture. Next they write (in the blue answer strip) the numbers in basic fact form, that they use to find how many more [illegible] write the number of additional cents needed. For the blue lettered problems (A to Q) the children are to write the subtraction basic fact that shows how to find the missing number (indicated by ▨) in the problem. After Problem A they should write "10 — 6 = 4."

Combining Equal Groups (Page 121 **Numbers in Action**). Use the directions for page 69, with adaptations. The children are to use each picture to help them decide what number to write on each answer line. Each blue-lettered problem (A to Q) at the right should be read silently by the children, who then should write the correct number on the answer line.

____ groups of birds
____ birds in each group
____ birds in all
5 twos=____

____ groups of bees
____ bees in each group
____ bees in all
4 twos=____

____ groups of rabbits
____ rabbits in each group
____ rabbits in all
2 fives=____

____ groups of bees
____ bees in each group
____ bees in all
2 threes=____

____ groups of rabbits
____ rabbits in each group
____ rabbits in all
3 threes=____

____ groups of birds
____ birds in each group
____ birds in all
4 twos=____

____ groups of birds
____ birds in each group
____ birds in all
3 threes=____

____ groups of rabbits
____ rabbits in each group
____ rabbits in all
2 fives=____

____ groups of bees
____ bees in each group
____ bees in all
5 twos=____

A 6=____ twos
B 2 twos=____
C 2 fives=____
D 4=2 groups of ____
E 3 twos=____
F 8=____ fours
G 9=3 groups of ____
H 4 twos=____
I 8=2 groups of ____
J 5 twos=____
K 6=____ threes
L 2 fours=____
M 6=2 groups of ____
N 8=____ twos
O 4=____ twos
P 8=4 groups of ____
Q 3 threes=____

____ flowers in all
Put 2 flowers in each group.
____ groups of 2 flowers
10=____ twos

____ plants in all
Put 3 plants in each group.
____ groups of 3 plants
9=____ threes

____ boxes in all
Put 5 boxes in each group.
____ groups of 5 boxes
10=____ fives

____ plants in all
Put 2 plants in each group.
____ groups of 2 plants
8=____ twos

____ flowers in all
Put 5 flowers in each group.
____ groups of 5 flowers
10=____ fives

____ plants in all
Put 2 plants in each group.
____ groups of 2 plants
10=____ twos

____ flowers in all
Put 2 flowers in each group.
____ groups of 2 flowers
6=____ twos

____ boxes in all
Put 2 boxes in each group.
____ groups of 2 boxes
10=____ twos

____ flowers in all
Put 4 flowers in each group.
____ groups of 4 flowers
8=____ fours

A 9=____ threes
B 5 twos=____
C 8=4 groups of ____
D 2 threes=____
E 6=____ twos
F 6=2 groups of ____
G 4 twos=____
H 10=____ fives
I 8=____ twos
J 4=____ twos
K 6=3 groups of ____
L 8=____ fours
M 3 threes=____
N 4=2 groups of ____
O 2 fives=____
P 9=3 groups of ____
Q 10=____ twos

Adapt the procedures on page 76 to the work on this page. For each picture have the children read the first problem printed in blue and write on the answer line the number of objects in the picture. Then, after reading the second problem, they should encircle objects to make [illegible] read each of the two following problems and for each write on its answer line the number that fits the situation. For the blue lettered problems at the right (A to Q), have the children read each one and then write the answer on the answer line.

Action). Adapt the directions for page 71 to this page. The children read the first problem and write on the answer line the number of objects in the picture. Next they write in the second problem the number that tells how many equal groups there are to be (as many as there are

Finally, the children write the correct numbers on the answer lines in the last two problems. For Problems A to Q at the right have the children read each one silently and then write the correct number on the answer line.

● ● ● ● ●

____ flowers in all

Make ____ equal groups.

____ flowers in each group

10=5 groups of ____

● ● ●

____ birds in all

Make ____ equal groups.

____ birds in each group

6=3 groups of ____

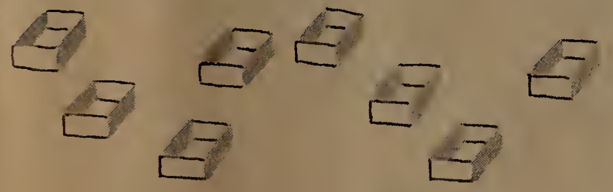
● ●

____ plants in all

Make ____ equal groups.

____ plants in each group

10=2 groups of ____



● ● ● ●

____ boxes in all

Make ____ equal groups.

____ boxes in each group

8=4 groups of ____

● ●

____ baskets in all

Make ____ equal groups.

____ baskets in each group

4=2 groups of ____

● ● ● ● ●

____ birds in all

Make ____ equal groups.

____ birds in each group

10=5 groups of ____

● ●

____ flowers in all

Make ____ equal groups.

____ flowers in each group

6=2 groups of ____

● ● ●

____ plants in all

Make ____ equal groups.

____ plants in each group

6=3 groups of ____

● ●

____ boxes in all

Make ____ equal groups.

____ boxes in each group

8=2 groups of ____

A 2 fours=____

B 10=2 groups of ____

C 6=____ threes

D 3 threes=____

E 10=____ fives

F 6=3 groups of ____

G 8=2 groups of ____

H 2 threes=____

I 10=5 groups of ____

J 2 twos=____

K 9=3 groups of ____

L 2 fives=____

M 3 twos=____

N 9=____ threes

O 5 twos=____

P 8=4 groups of ____

Q 10=____ twos

Pictorial Problems for the 10 Group (Page 124 **Numbers in Action**). Adapt the directions for page 77 to this page. For each picture have the children cross off one of the two words, **plus** or **minus**, printed in red. Then they are to write, in the red answer strip, the basic fact that belongs with the picture. (For example, for the first picture they should cross off the word **plus** and write "10 — 3 = 7.")


plus minus


plus minus


plus minus


plus minus

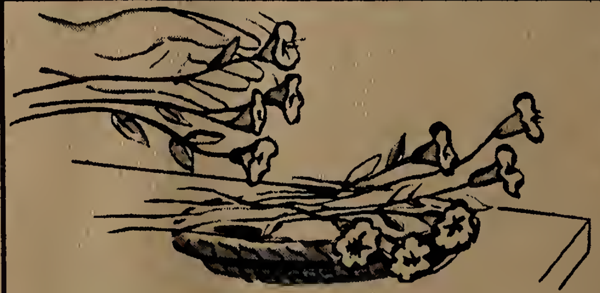

plus minus


plus minus


plus minus


plus minus


plus minus


plus minus


plus minus


plus minus


plus minus


plus minus


plus minus


plus minus

A 7 bees plus 2 bees= ____ bees

B 9 bags minus 6 bags= ____ bags

C 5 sticks plus 4 sticks= ____ sticks

D 10 books minus 5 books= ____ books

E 10 cows minus 8 cows= ____ cows

F 3 sleds plus 3 sleds= ____ sleds

G 6 ducks minus 5 ducks= ____ duck

H 2 beds plus 8 beds= ____ beds

I 1 bear plus 6 bears= ____ bears

J 8 dolls minus 4 dolls= ____ dolls

K 9 cars minus 2 cars= ____ cars

L 10 boats minus 3 boats= ____ boats

M 9 girls minus 8 girls= ____ girl

N 6 toys plus 4 toys= ____ toys

O 3 boys plus 7 boys= ____ boys

P 5 mice minus 2 mice= ____ mice

Q 8 birds plus 1 bird= ____ birds

A 8−2= ____

B 10−7= ____

C 2+2= ____

D 6−3= ____

E 3+4= ____

F 7−5= ____

G 10−1= ____

H 3+5= ____

I 5−4= ____

J 9+1= ____

K 5+5= ____

L 3−2= ____

M 2+7= ____

N 10−9= ____

O 7+3= ____

P 8+2= ____

Q 9−5= ____

A Subtract 7 from 8. ____

B Add 5 and 2. ____

C Subtract 4 from 9. ____

D Add 1 and 9. ____

E Add 6 and 3. ____

F Add 4 and 4. ____

G Subtract 6 from 10. ____

H Subtract 2 from 6. ____

I Add 2 and 3. ____

J Subtract 2 from 10. ____

K Add 4 and 6. ____

L Add 1 and 3. ____

M Subtract 2 from 7. ____

N Add 4 and 3. ____

O Subtract 7 from 9. ____

P Add 3 and 6. ____

Q Subtract 4 from 10. ____

Review of Basic Facts (Page 125 **Numbers in Action**). The directions provided for page 63 may be adapted to the work on this page. Give separate directions for each column of problems, identifying them by their colored letters, red, gray, and black. Remind the children that in the column of black-lettered problems they should write the appropriate basic fact on the red answer line following each problem.


A


B


C


D

A How many boxes will there be in all?

—— boxes plus minus —— boxes = —— boxes

B How many more flowers are there than plants?

—— flowers plus minus —— flowers = —— flowers

C How many flowers will be left?

—— flowers plus minus —— flowers = —— flowers

D How many more boxes are there than plants?

—— boxes plus minus —— boxes = —— box

E How many more flowers are there than boxes?

—— flowers plus minus —— flowers = —— flowers

F How many flowers will there be in all?

—— flowers plus minus —— flowers = —— flowers

G How many boxes will be left?

—— boxes plus minus —— boxes = —— boxes

H How many plants will there be in all?

—— plants plus minus —— plants = —— plants


E


F


G

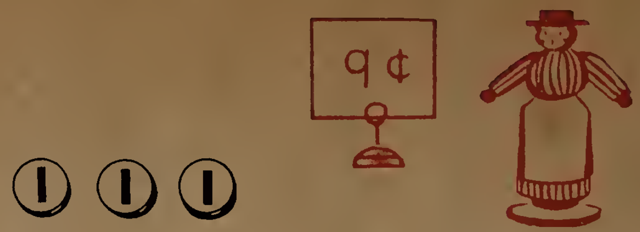

H

[illegible] Problem A to yourselves. Then look at Picture A. Go back to Problem A and decide which of the two words, **plus** or **minus**, belongs with the picture. Cross off the word that does not belong. Now write the [illegible] on the red answer strip in Picture A write the numbers that you use to find the answer for Problem A. [The children should write the basic fact 8 + 2 = 10.] Do these same things for each of the other problems and pictures."

"What toy is shown in the first picture? How much does it cost? Read the first problem and write the correct number on the answer line. The money Don has is also shown in the picture. Now read the next prob-

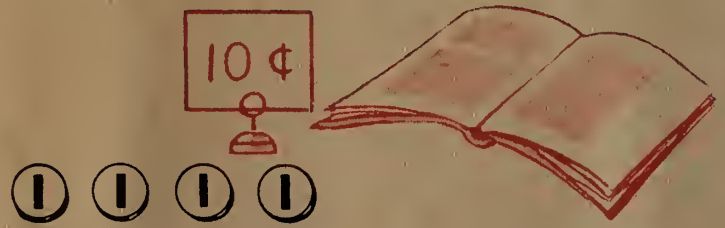
What number should you write on the answer line? For each of the other pictures read the problems printed in the picture and write the correct numbers on the answer lines."

The toy horse costs ____¢.
Don has ____¢.
He needs ____¢ more.



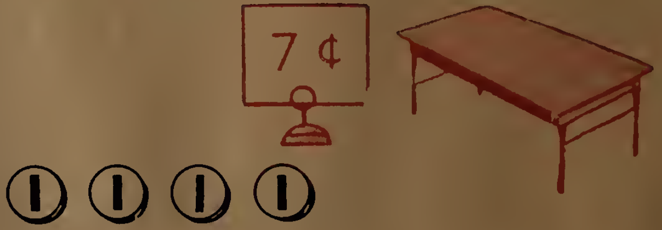
The doll costs ____¢.
Carol has ____¢.
She needs ____¢ more.

The doll costs ____¢.
Carol has ____¢.
She needs ____¢ more.

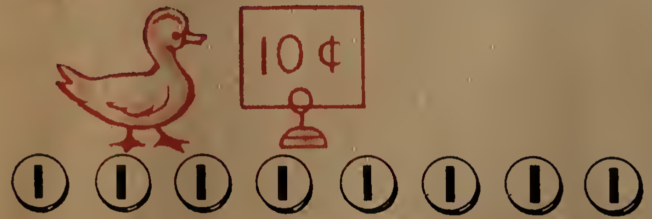


The book costs ____¢.
Don has ____¢.
He needs ____¢ more.

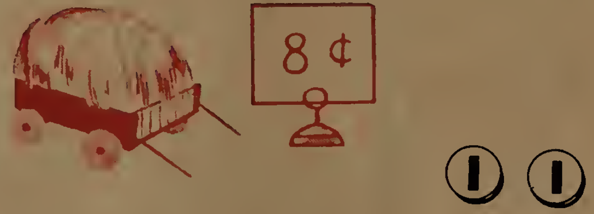
The toy house costs ____¢.
Carol has ____¢.
She needs ____¢ more.



The table costs ____¢.
Carol has ____¢.
She needs ____¢ more.

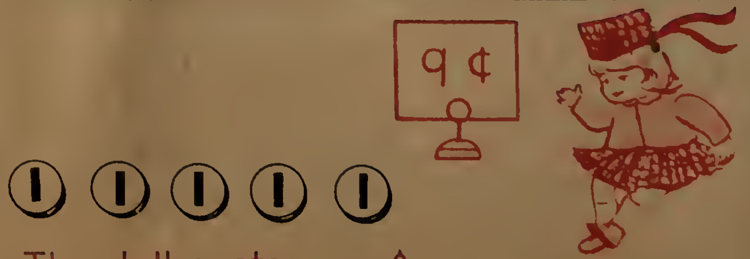


The toy duck costs ____¢.
Don has ____¢.
He needs ____¢ more.

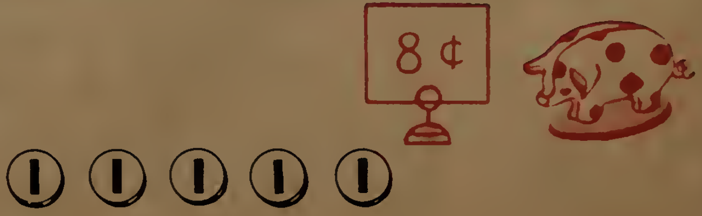


The toy wagon costs ____¢.
Don has ____¢.
He needs ____¢ more.

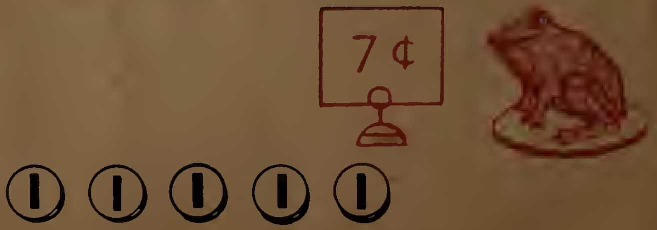
The doll bed costs ____¢.
Carol has ____¢.
She needs ____¢ more.



The doll costs ____¢.
Carol has ____¢.
She needs ____¢ more.



The toy pig costs ____¢.
Don has ____¢.
He needs ____¢ more.



The toy frog costs ____¢.
Don has ____¢.
He needs ____¢ more.

A 6+4= ___

B 4+4= ___

C 7−3= ___

D 8−5= ___

A B C D

E 5+5= ___

F 9−4= ___

G 8+2= ___

H 7+2= ___

E F G H

I 8−2= ___

J 1+1= ___

K 10−4= ___

L 6+1= ___

I J K L

M 3+5= ___

N 4+2= ___

O 3+3= ___

P 4−2= ___

M N O P

A 5−4= ___

B 2+3= ___

C 5−3= ___

D 9+1= ___

A B C D

E 2+5= ___

F 6−2= ___

G 2+6= ___

H 9−6= ___

E F G H

I 1+8= ___

J 3−2= ___

K 6−1= ___

L 7−5= ___

I J K L

M 4−1= ___

N 10−1= ___

O 7+3= ___

P 3+6= ___

M N O P

[illegible] the first basic fact (block letter **A**) and tell the children to write the answer to this problem on the red answer line. Then tell them to find the red vertical strip that has the black letter **A** over it and write the basic fact in it in draw a line, and write the answer. Do not require them to put a plus or minus sign at the left of the example. The vertical answer strip will help them write the numbers in a straight line. Have them proceed in the same way with all the other problems.

Regrouping to Form Totals of 11 to 18 (Page 131 Numbers in Action). Say: "How many apples in black are there in the first picture? Write this number on the first red answer line under the apples. How many red apples are there? Write this number on the next red answer line. Now draw a circle around all the apples in black and enough of the red apples to make ten in all. Write 10 on the first black answer line because you put ten apples in the circle. How many apples are not in the circle? Write this number on the other black answer line. Now on the gray answer line write the number of apples in all. Do these same things for each of the other pictures on the page."

___ apples ___ apples

___ apples ___ apples

___ apples in all

___ cookies ___ cookies

___ cookies ___ cookies

___ cookies in all

___ oranges ___ oranges

___ oranges ___ oranges

___ oranges in all

___ cookies ___ cookies

___ cookies ___ cookies

___ cookies in all

___ apples ___ apples

___ apples ___ apples

___ apples in all

___ oranges ___ oranges

___ oranges ___ oranges

___ oranges in all

___ cookies ___ cookies

___ cookies ___ cookies

___ cookies in all

___ apples ___ apples

___ apples ___ apples

___ apples in all

___ oranges ___ oranges

___ oranges ___ oranges

___ oranges in all

___ cookies ___ cookies

___ cookies ___ cookies

___ cookies in all

___ apples ___ apples

___ apples ___ apples

___ apples in all

___ oranges ___ oranges

___ oranges ___ orange

___ oranges in all

___ cookies ___ cookies

___ cookies ___ cookies

___ cookies in all

___ apples ___ apples

___ apples ___ apples

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___ oranges ___ oranges

___ oranges ___ oranges

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___ apples ___ apples

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___ cookies ___ cookies

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___ cookies in all

___ oranges ___ oranges

___ oranges ___ oranges

___ oranges in all

___ apples ___ apples

___ apples ___ apples

___ apples in all

___ apples ___ apples

___ apples ___ apples

___ apples in all

___ oranges ___ oranges

___ oranges ___ oranges

___ oranges in all

___ cookies ___ cookies

___ cookies ___ cookies

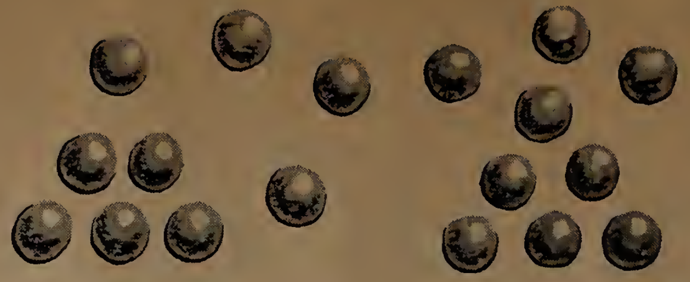
___ cookies in all

[illegible] the directions for page 119 to the work on this page. For each picture have the children write, first, the number of objects in the black and in the red group. These numbers should be written on the first two red answer lines. The children then make a group of ten objects

the red group to make ten. They write **10** on the first black answer line and, on the second, whatever number represents the objects that are not encircled. Finally they write on the gray answer line the number representing the total number of objects in the picture.

Grouping for the "Teen" Numbers (Page 114 Numbers in Action). Say: "Look at the first picture. Find ten apples and draw a circle around them. How many apples are left outside the circle? Now read the problem printed in red in this picture. Write on the first answer line the number of apples left outside the circle. Write the number of apples in all on the next line. [illegible] of the other pictures." Encourage the children to recognize, without counting, the group of ten they are going to encircle. Some children may find it helpful to cover the objects they do not need before they draw the circle.

10 apples and ____ more apples
____ apples in all



10 oranges and ____ more oranges
____ oranges in all

10 oranges and ____ more oranges
____ oranges in all

10 apples and ____ more apple
____ apples in all

10 oranges and ____ more oranges
____ oranges in all

10 apples and ____ more apples
____ apples in all

10 apples and ____ more apples
____ apples in all

10 oranges and ____ more oranges
____ oranges in all

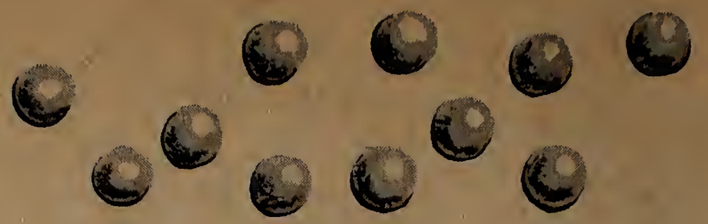
10 apples and ____ more apples
____ apples in all

10 oranges and ____ more oranges
____ oranges in all

10 oranges and ____ more oranges
____ oranges in all

10 apples and ____ more apple
____ apples in all

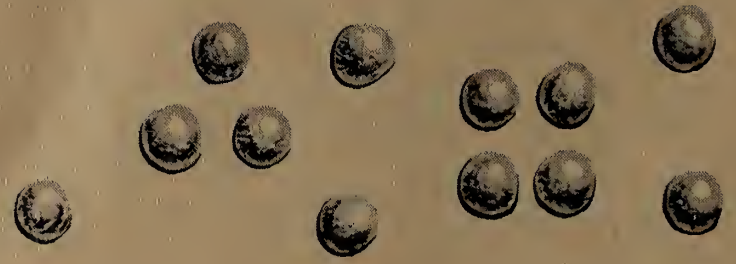
10 apples and ___ more apples
___ apples in all



10 oranges and ___ more orange
___ oranges in all

10 oranges and ___ more oranges
___ oranges in all

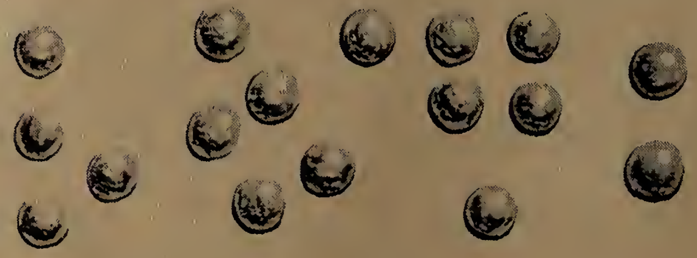
10 apples and ___ more apples
___ apples in all



10 oranges and ___ more oranges
___ oranges in all

10 apples and ___ more apples
___ apples in all

10 apples and ___ more apples
___ apples in all



10 oranges and ___ more oranges
___ oranges in all

10 apples and ___ more apples
___ apples in all

10 oranges and ___ more oranges
___ oranges in all

10 apples and ___ more apples
___ apples in all

10 oranges and ___ more oranges
___ oranges in all

Grouping for the "Teen" Numbers (Page 122) **Numbers in Action.** For the work on this page use directions similar to those provided for page 121. In each picture the children should first recognize a group of ten apples or oranges. They should draw a circle around these ten objects. (Any group of ten may be encircled, of course.) They then should write, on the answer lines in the problem, first the number of objects that are outside the circle they have drawn and then the total number of objects in the picture.

examine the pictures and discover that in each picture a group of animals is joining another group. Then tell the children to write, in the red answer strip in each picture, the numbers that they use to find how many animals there will be in all when the groups have been

2 + 5 = 7.) For Problems A to H (red) and A to Q (black), direct the children to read each one and then write the answer on the red answer line. Each answer for the basic facts in vertical form should be written directly below the problem.

A Add 4 and 3. ____

B 5 cars+1 car=____ cars

C 4 plus 6 is ____.

D Add 2 and 7. ____

E Add 5 and 4. ____

F 7 dolls+2 dolls=____ dolls

G 6 plus 3 is ____.

H 2 dogs plus 2 dogs=____ dogs

Add

A	B	C	D	E	F
3	2	1	7	4	6
4	1	7	3	5	2

G	H	I	J	K	L
2	9	5	6	8	1
3	1	3	4	2	4

M	N	O	P	Q	R
3	1	1	2	8	4
6	1	3	4	1	4

A 3+7=____

B 1+8=____

C 2+6=____

D 5+5=____

E 1+6=____

F 5+2=____

G 3+3=____

H 4+1=____

I 1+9=____

J 2+5=____

K 7+1=____

L 4+2=____

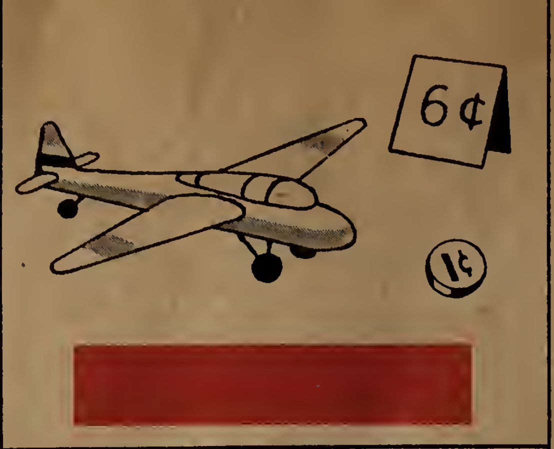
M 6+1=____

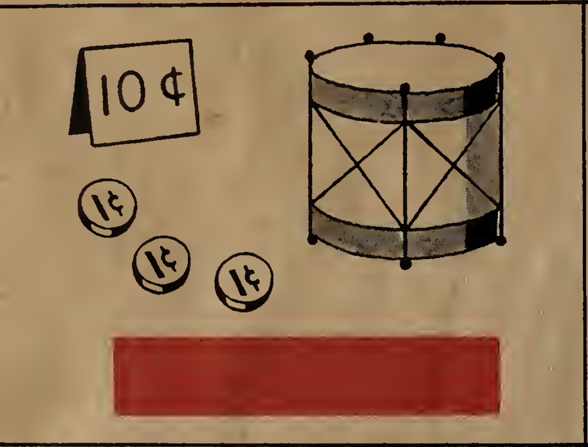
N 2+8=____

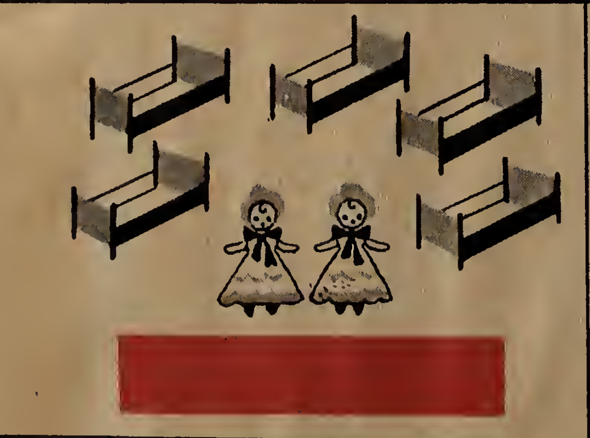
O 1+5=____

P 3+1=____

Q 3+5=____







A 8 birds − 2 birds = ____ birds

B Subtract 6 from 10. ____

C 9 minus 1 is ____.

D 7 minus 5 is ____.

E Subtract 1 from 8. ____

F 10 dogs − 5 dogs = ____ dogs

G 8 boats − 5 boats = ____ boats

H Subtract 6 from 7. ____

Subtract

A	**B**	**C**	**D**	**E**	**F**
9	8	6	4	9	10
5	7	2	3	3	4

G	**H**	**I**	**J**	**K**	**L**
7	6	3	10	7	5
2	5	2	1	4	1

M	**N**	**O**	**P**	**Q**	**R**
9	7	7	10	9	9
2	1	3	7	8	4

A 3 − 1 = ____

B 8 − 6 = ____

C 10 − 8 = ____

D 9 − 7 = ____

E 6 − 3 = ____

F 4 − 1 = ____

G 8 − 3 = ____

H 10 − 2 = ____

I 9 − 6 = ____

J 6 − 4 = ____

K 2 − 1 = ____

L 5 − 4 = ____

M 8 − 4 = ____

N 10 − 9 = ____

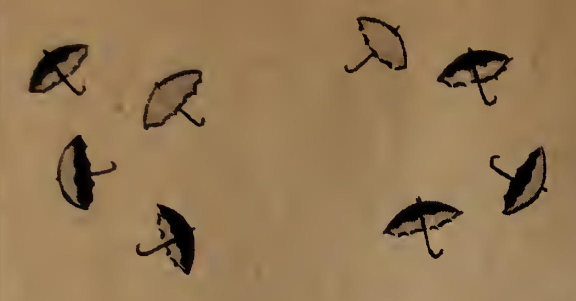
O 10 − 3 = ____

P 5 − 3 = ____

Q 4 − 2 = ____

[illegible] this page. Discuss the [illegible] briefly to make sure the children recognize the various subtraction situations and understand that they are to find how many more pennies are needed in two of the pictures, how many more whirlers [illegible] answer strip in each picture have the children write the basic fact they use to find the answer for the problem shown by the picture. For the lettered problems at the right, direct the children to read each one silently and then write the answer in the appropriate place.

Numbers in Action). Three procedures are involved in finding the numbers to write on the answer lines in the eight pictures: In Pictures A and B, examine the pictures; in Pictures C and D, encircle groups of the quantity indicated in the problems; in the other four pictures, join the dots. In each red-lettered problem (A to X) at the right, the children either write the answer on the answer line or cross off the word that does not belong. In Rows A to E, the children write in numbers to put the numbers in each row in their proper sequence.


___ fours = ___ A


___ twos = ___ B

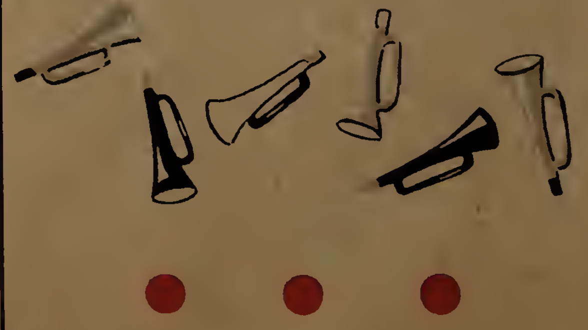

___ = ___ threes C


___ = ___ twos D


___ = 3 groups of ___ E


___ = 4 groups of ___ F


___ = 2 groups of ___ G


___ = 3 groups of ___ H

A 9 = ___ threes

B 3 twos = ___

C 8 = ___ twos

D 2 fours = ___

E 9 = 3 threes fives

F 10 = ___ twos

G 10 = 2 fives twos

H 2 threes = ___

I 4 = 2 threes twos

J 10 = 5 twos fives

K 6 = ___ twos

L 8 = 2 twos fours

M 6 = ___ threes

N 2 fives = ___

O 4 = ___ twos

P 5 twos = ___

Q 6 = 3 threes twos

R 8 = 4 twos fours

S 3 threes = ___

T 8 = ___ fours

U 2 twos = ___

V 10 = ___ fives

W 4 twos = ___

X 6 = 2 twos threes

A 87 88 89 ___ 91 ___ 93 ___ ___

B 94 ___ 96 97 ___ ___ ___ 101

C 29 ___ ___ 32 33 ___ 35 ___ 37

D 15 ___ ___ 18 ___ 20 ___ 22 ___

E 60 ___ 62 ___ ___ 65 66 ___ 68

A Stick A is just ____ inches long.

B Stick B is a little more than ____ inches long.

C Stick C is just ____ inches long.

D Stick D is a little less than ____ inches long.

E Stick E is a little less than ____ inches long.

F Stick F is a little more than ____ inches long.

G Stick G is a little less than ____ inches long.

H Stick H is just ____ inches long.

I Picture I has ____ pints of milk.

J Picture J has ____ quarts of milk.

K Picture K has ____ quarts of milk.

L Picture L has ____ pints of milk.

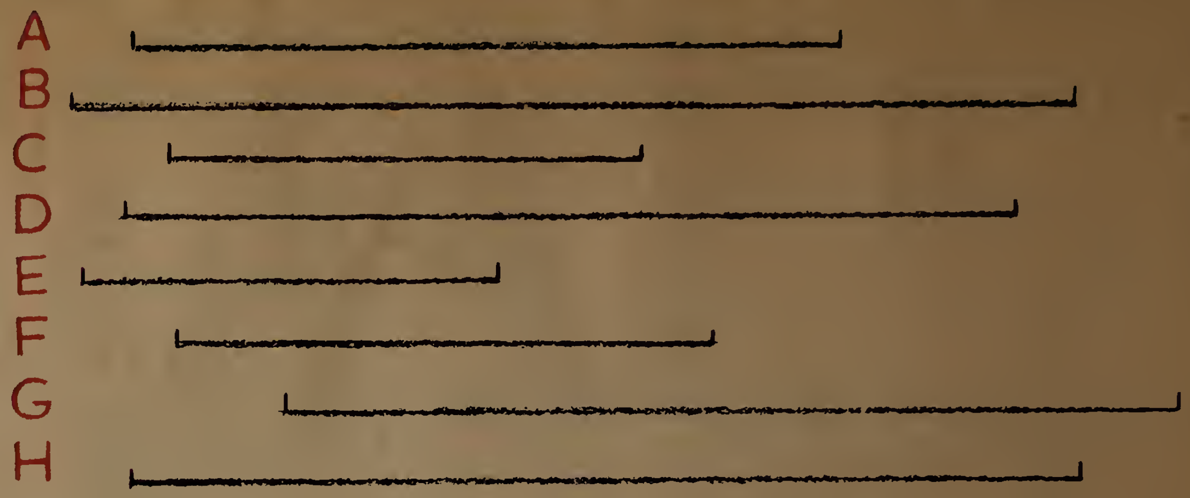
M Picture M has ____ cents.

N Picture N has ____ cents.

O Picture O has ____ cents.

P Picture P has ____ cents.

Q Picture ____ has more money than Picture N.

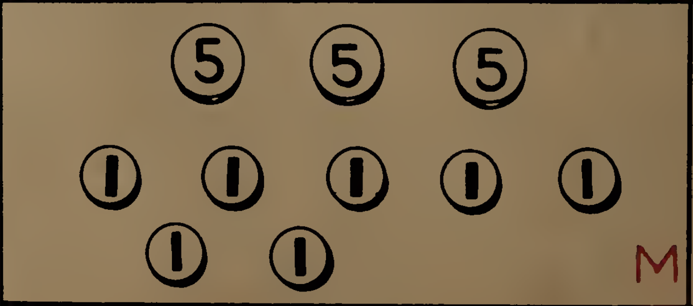



I

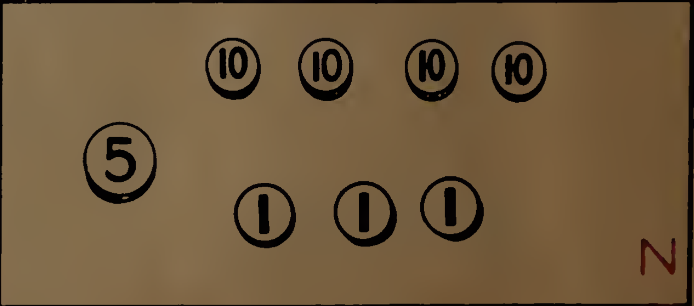

J


K

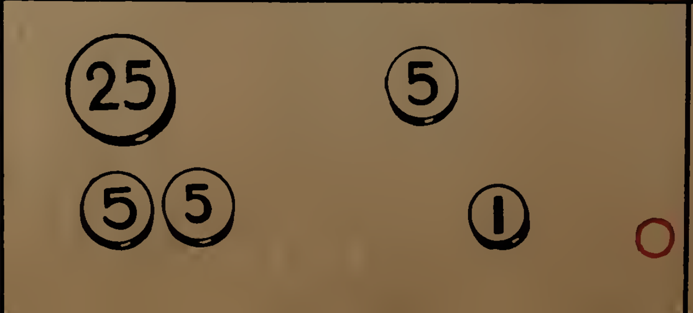

L



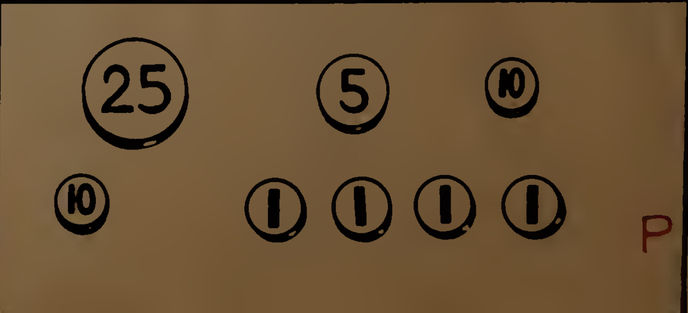
M



N



O



P

[illegible] the stick marked A. Have [illegible] number on the red answer line in Problem A. Do the same for Problems B to H. When the children have finished these problems, have them read Problem I and look at Picture I. Ask questions that [illegible] they can write the answer to Problem I on its answer line. Then direct them to work Problems J, K, and L in the same way. The remaining five problems (M to Q) should each be read silently and the answer determined by examination of the appropriate picture.

Action). Tell the children that they are to add in each red-lettered problem at the left of the gray line and subtract in each gray-lettered problem at the right of the line. Direct them to read each problem silently (the first problem is read "4 + 6") and decide what the answer

black-lettered problem below the gray line, the children are to write the answer on the red answer line and then copy the problem in the red answer strip in vertical form, as they did on page 118. Do not require them to put a plus or minus sign at the left of the example.

Add

A 4 6	**B** 2 5	**C** 4 5	**D** 1 9	**E** 4 2
F 5 2	**G** 3 3	**H** 1 8	**I** 3 2	**J** 4 4
K 7 1	**L** 6 4	**M** 2 7	**N** 6 2	**O** 4 1
P 3 6	**Q** 5 4	**R** 1 5	**S** 2 3	**T** 7 3
U 2 8	**V** 3 4	**W** 2 1	**X** 3 5	**Y** 6 1

Subtract

A 5 2	**B** 10 3	**C** 9 8	**D** 3 1	**E** 6 4
F 5 1	**G** 4 2	**H** 7 6	**I** 7 1	**J** 9 1
K 9 3	**L** 8 6	**M** 6 1	**N** 5 4	**O** 2 1
P 9 7	**Q** 4 1	**R** 8 3	**S** 10 8	**T** 9 6
U 7 2	**V** 8 5	**W** 8 1	**X** 7 5	**Y** 10 7

A 5−3= ___

B 7+2= ___

C 1+6= ___

D 10−6= ___

E 9−5= ___

F 1+2= ___

G 8+1= ___

H 8−4= ___

[illegible] and interesting because of its puzzle aspect. Let them examine the picture for a few minutes. Try to get them to notice that many of the things happening in the picture show groups combining or groups separating. Say: "Look at the man with the balloons. What is many are flying away? How many does he have left? Can you make a problem about the balloons? Somewhere among the balloons the letter **A** is hidden. Find the letter **A**. Now find the answer line at the bottom of the page that has the letter **A** (Directions continued on page 129)

E ______ G ______ I ______

B ______ D ______ F ______ H ______ J ______

Directions continued

from page 1 and make a little mark on it with your pencil. Now make a little mark on a swing in the little picture. Do this until you have a mark on each swing in the big picture and a mark on a swing in the little picture for each swing in the big picture. Are there some swings in the little picture with no marks on them? Cross them off with your pencil. Now you are going to give a swing to as many boys as you can. Draw a line from a boy to a swing. Do this until you have used all the boys or all the swings. Are there more swings than boys? If there are, put this mark, ●, in the little red square in the corner of the picture. If there are fewer swings than boys, put this mark, O, in the square." Have them do the same things with the other small pictures.

from page 2 Be sure they understand that two children would play on a teetertotter, but that one child could have two sandwiches or apples. Finally direct them to draw a ring around (or lines between) one stick figure and two objects, or two stick figures and one object. Explain that they must not use objects that have been crossed off, and that there may be some objects not connected to stick figures by lines.

from page 6 the **right** and are to encircle the correct red number or number word at the right. The exercise can be made more challenging by substituting the following directions. Give each child two crayons of different colors (for example, blue and green). Say: "What number is the red car, counting from the **left?** Draw a blue circle around its number and its number word. What number is the red car, counting from the **right?** Draw a green circle around its number and its number word. Do this for each of the other pictures."

from page 8 children to start from the bottom and the left. Be sure to relocate the rows and boxes. The truck is now in Row 10, Box 1.

The column of exercises in red on page 9 may be used in four ways: starting from the top and left, the top and right, the bottom and left, and the bottom and right. Relocate the rows and boxes each time.

from page 10 the red picture first and determine how many animals there will be in all when the action shown in the picture has been completed. Then have them put either ≷ or X in the answer square for each of the other pictures in that strip.

from page 23 answer for the problem where it belongs. Do these same things for each of the other pictures on this page."

In Problems A to H at the right the children are to write the correct numbers and signs on the blue answer lines.

from page 28 you do not need in each picture before you write the number on the answer line." In Problems A to F at the right, have the children read the first part and write the answer. Next they should decide which of the two following parts (beginning with either **Add** or **Subtract**) belongs with the problem. They should cross out the part that does not belong and write the answer on the correct line.

from page 31 before it. In each answer block write the number that tells how many sticks the picture shows after you have finished crossing off the sticks. In some pictures you may not have to cross off any sticks." When the children have finished, direct attention to Rows A to E below. Say: "Each row of numbers should be in order by tens. The first number in each row tells you where to start counting. In the first row, why should you write **20** between the 10 and the 30? Is the next number correct? Why is no number needed between the 40 and the 50? Cross off this 20. Now finish the row, crossing off and adding numbers as you need to. In each of the other rows put the numbers in order by tens."

from page 33 the next largest on the second line, and so on." Follow the same procedures with the other three picture strips.

from page 34 other rows of numbers. Since this exercise is intended to be challenging, more than one way of writing in and crossing off numbers may exist. Encourage any ingenuity shown by the children.

from page 35 Write this number on the last line." Have the children proceed in the same way with the other five pictures.

In Problems A to Q at the right, draw attention to the two brown lines beside each number. The children are to write on the first line the number that means one more than the number shown, and on the second line the number that means ten more than the number shown.

from page 36 at the right (brown letters A to Q) is like that on page 35. The only difference is that here the children write first the number that means one less than the number shown and then the number that means ten less than the number shown.

from page 37 cents' sign. Will the ten pennies in the brown part buy as much as the dime in the white part? Draw a line between these coins. Change as many of the coins in the brown part for coins in the white part as you can. Do these same things for the other pictures."

from page 42 this number of snowmen and write the letter **B** in the answer square. Do the same things for the other pictures."

from page 46 answer to the problem on the brown answer line. Do these two things for each of the other problems above the gray line." The problems below the line are about groups that are separating into equal groups. Adapt the directions given above.

from page 50 the wagon has traveled is how many sticks long? [A little more than five sticks long.] Find the wagon at the bottom of the page. Write the number 5 on the short green line beside it. Draw a circle around the word **more** and cross out the word **less.** Now measure the line that shows how far the tricycle has gone. How many times did you use the stick? Write that number on the green line beside the tricycle at the bottom of the page. Cross out both **more** and **less.** Why?" Have the children work independently with the other lines.

from page 51 end. Now make a mark just beyond this one to show where the boat will stop." Be sure each child understands why his final mark should indicate a distance of just a little more than 2 sticks. Have the children make the indicated measurements on the remaining lines.

from page 52 letter that is in front of these words in the answer square in front of the cutout. Do the same things for each of the other cutouts." Encourage the children to use judgment. For example, they should decide that the row of dolls under the owls should be marked **O** [less than 5 inches], since the row is closer to 5 inches than to 4 inches.

from page 54 and cross out the other words. If you put this mark, ≷ (scribble), in the square, cross out all the words. Work in this way with each of the pictures in this row. Then go on to the other rows.

from page 59 the box. Look at the first problem in this picture. How many balls should you subtract from six balls to find how many more you need? Write this number on the first answer line. Why should you write **4** on the next answer line? Write the correct number in the last problem."

from page 60 them. Look at the first problem in this picture. How many cents should you subtract from 7 cents to find how many more cents you need? Write this number on the first answer line. What should you write on the second answer line? Now read the last problem and write the answer. Does the picture now show this amount of money? Do these same things for the other pictures."

from page 61 number that tells how many more pennies you need. Do these same things for each of the other pictures." In Problems A to Q at the right, direct the children to write the numbers that tell how to find the number that belongs where the screen (▤) is. For example, in Problem A the children should write "5 — 2 = 3" on the answer line.

from page 65 the smaller group is printed in green. Have the children cross off, in the larger group, as many animals as there are in the smaller group. They then write the correct numbers on the answer lines in each problem.

from page 71 until you have joined a second doll to each dot. [Be sure the children understand that all the dolls must be used and that the groups must be equal.] Now read the third part of the problem and on the answer line write the number of dolls in each group. Read the last part of the problem, and write the number that belongs on the answer line. Do these same things for each of the other pictures." In Problems A to Q at the right, the children are to write a number on the answer line or cross off the word that is not needed to complete the problem.

from page 75 should you write on the second answer line? Decide in the same way which numbers to write on the answer lines in the last problem. Do these same things for each of the other pictures. When you find a problem that cannot be answered, cross it off."

from page 76 use the groups of boxes several times. How many balls did you put with each group of five boxes? Write that number on the answer line in the problem." Give similar directions for the other pictures if necessary. If the children cannot put an **equal** number of green objects with each group of boxes, they are to cross off the problem.

from page 79 hundred. Are there any sticks that are not in a group of one hundred or a bundle of ten? In the right part of the white answer strip make a tally mark for each of these sticks. Now in the green answer strip write the number that tells how many sticks there are in all. Do these same things for each of the other pictures."

from page 128 next to it. Write the problem about the balloons on that line." Be sure the children understand that they are to write only the basic fact (9 — 2 = 7) on the answer line. Tell them that there are other things in the picture to make problems about. Explain that there is a letter hidden in each such group of things, and that the letter tells them which answer line to write the problem on. Have them find the problems and write them on the correct answer lines. There is a problem for each answer line.

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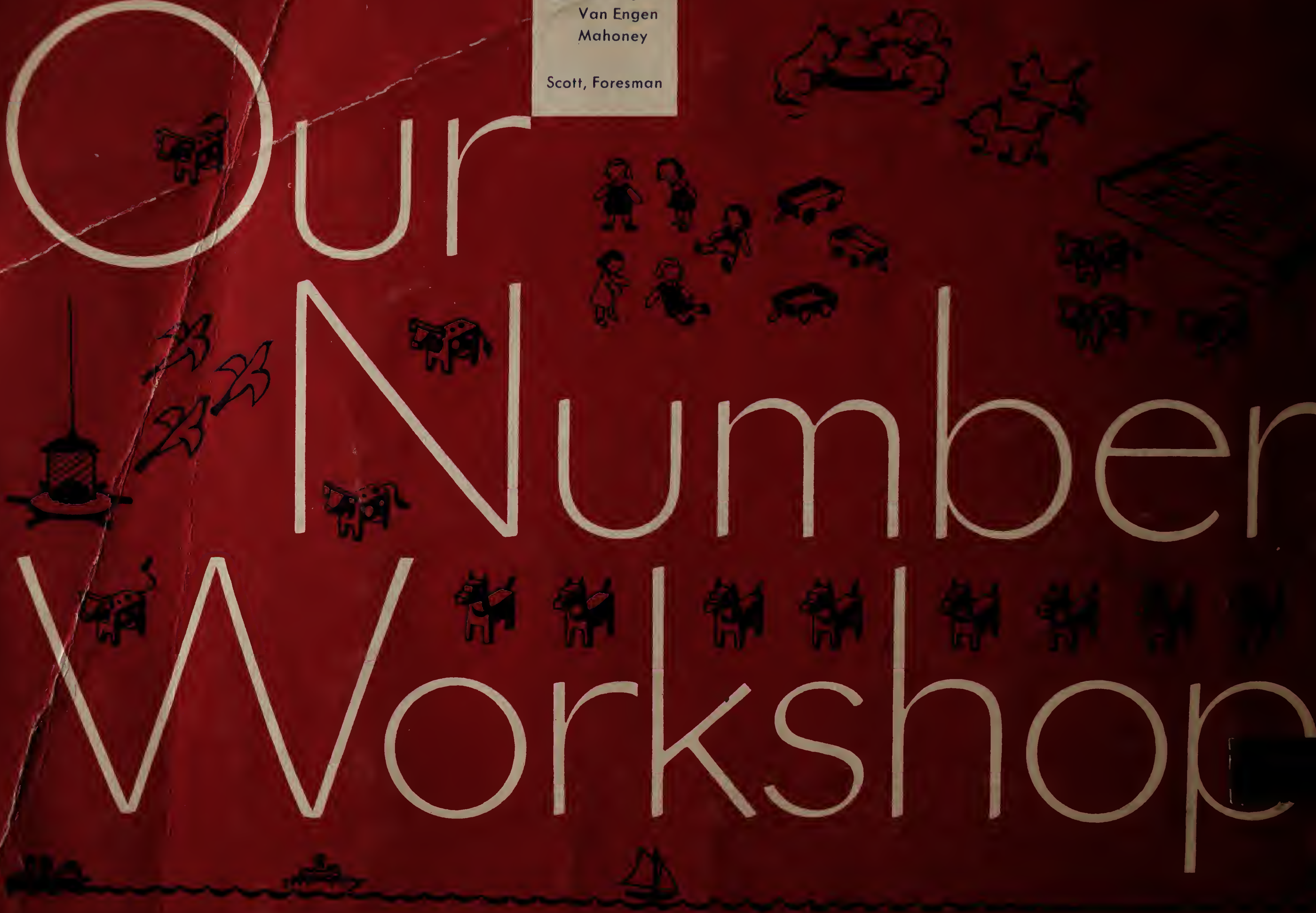
Hartung
Van Engen
Mahoney

Scott, Foresman

Our Number Workshop



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